

CONFERENCE ON DISARMAMENT

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LETTER DATED 19 AUGUST 1991 FROM THE REPRESENTATIVE OF FRANCE
ADDRESSED TO THE PRESIDENT OF THE CONFERENCE ON DISARMAMENT
TRANSMITTING THE TEXT OF THE "COMMUNIQUE ISSUED FOLLOWING THE
MEETING OF THE FIVE ON ARMS TRANSFERS AND NON-PROLIFERATION
(PARIS, 8 AND 9 JULY 1991)"

I have the honour to send you herewith the official text of the
communique issued following the meeting held in Paris on 8 and 9 July 1991
between representatives of the five States permanent members of the
United Nations Security Council concerning arms transfers and
non-proliferation.

I would be grateful if you would circulate this text as an official
document of the Conference, and arrange for its translation into the other
languages of the Conference.

(Signed) Gérard ERRERA

COMMUNIQUE ISSUED FOLLOWING THE MEETING OF THE
FIVE ON ARMS TRANSFERS AND NON-PROLIFERATION

(Paris, 8 and 9 July 1991)

1. Representatives of the United States of America, the People's Republic of China, France, the United Kingdom, and the Union of Soviet Socialist Republics, met in Paris on 8 and 9 July to review issues related to conventional arms transfers and to the non-proliferation of weapons of mass destruction.

They noted with concern the dangers associated with the excessive build up of military capabilities, and confirmed they would not transfer conventional weapons in circumstances which would undermine stability. They also noted the threats to peace and stability posed by the proliferation of nuclear weapons, chemical and biological weapons, and missiles, and undertook to seek effective measures of non-proliferation and arms control in a fair, reasonable, comprehensive and balanced manner on a global as well as on a regional basis.

2. They had a thorough and positive exchange of views on the basis of the arms control initiatives presented in particular by President Bush, President Mitterrand, Prime Minister Major and on other initiatives which address these problems globally and as a matter of urgency in the Middle East. They also agreed to support continued work in the United Nations on an arms transfers register to be established under the aegis of the United Nations Secretary-General, on a non-discriminatory basis, as a step towards increased transparency on arms transfers and in general in military matters.

They stressed that the ultimate response to the threat of proliferation is verifiable arms control and disarmament agreements amongst the parties concerned. They expressed strong support for full implementation of existing arms control regimes. For their part, they will contribute to this objective by developing and maintaining stringent national and, as far as possible, harmonized controls to ensure that weapons of mass-destruction related equipments and materials are transferred for permitted purposes only and are not diverted.

They also strongly supported the objective of establishing a weapons of mass destruction-free zone in the Middle East. They expressed their view that critical steps towards this goal include full implementation of United Nations Security Council resolution 687 and adoption by countries in the region of a comprehensive programme of arms control for the region, including:

- a freeze and ultimate elimination of ground-to-ground missiles in the region;
- submission by all nations in the region of all of their nuclear activities to IAEA safeguards;
- a ban on the importation and production of nuclear weapons usable materials;

- agreement by all States in the region to undertake to becoming parties to the Chemical Weapons Convention as soon as it is concluded in 1992.

3. They acknowledged that Article 51 of the United Nations Charter guarantees every State the right of self-defence. That right implies that States have also the right to acquire means with which to defend themselves. In this respect, the transfer of conventional weapons, conducted in a responsible manner, should contribute to the ability of States to meet their legitimate defence, security and national sovereignty requirements and to participate effectively in collective measures requested by the United Nations for the purpose of maintaining or restoring international peace and security.

They recognized that indiscriminate transfers of military weapons and technology contribute to regional instability. They are fully conscious of the special responsibilities that are incumbent upon them to ensure that such risks be avoided, and of the special role they have to play in promoting greater responsibility, confidence and transparency in this field. They also recognize that a long-term solution to this problem should be found in close consultation with recipient countries.

4. They expressed the intention that:

- when considering under their national control procedures conventional weapons transfers, they will observe rules of restraint. They will develop agreed guidelines on this basis;
- taking into account the special situation of the Middle East as a primary area of tension, they will develop modalities of consultation and of information exchanges concerning arms transfers to this region as a matter of priority;
- a group of experts will meet in September with a view to reaching agreement on this approach;
- another plenary meeting will be held in October in London;
- further meetings will be held periodically to review these issues.

5. They expressed the conviction that this process of continuing cooperation will contribute to a worldwide climate of vigilance in this field which other countries will share.

CONFERENCE ON DISARMAMENT

CD/1104
19 August 1991

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REPORT OF THE AD HOC COMMITTEE ON EFFECTIVE INTERNATIONAL ARRANGEMENTS TO ASSURE NON-NUCLEAR-WEAPON STATES AGAINST THE USE OR THREAT OF USE OF NUCLEAR WEAPONS

I. Introduction

1. At its 578th plenary meeting on 24 January 1991 the Conference on Disarmament decided to re-establish for the duration of its 1991 session, an Ad Hoc Committee to continue to negotiate with a view to reaching agreement on effective international arrangements to assure non-nuclear weapon States against the use or threat of use of nuclear weapons. It further decided that the Ad Hoc Committee would report to the Conference on the progress of its work before the conclusion of 1991 (CD/1050).

II. Organization of work

2. At its 582nd plenary meeting on 14 February 1991, the Conference on Disarmament appointed Ambassador Juraj Kralik of the Czech and Slovak Federal Republic as Chairman of the Ad Hoc Committee. Mr. V. Bogomolov, Political Affairs Officer, United Nations Department for Disarmament Affairs, served as Secretary of the Ad Hoc Committee.

3. The Ad Hoc Committee held 11 formal and 4 informal meetings between 12 March and 19 August 1991.

4. At their request, the Conference on Disarmament decided to invite the representatives of the following States not members of the Conference to participate in the meetings of the Ad Hoc Committee during the 1991 session: Angola, Austria, Bangladesh, Cameroun, Chile, Costa Rica, Democratic People's Republic of Korea, Finland, Greece, Iraq, Ireland, Jordan, Malaysia, New Zealand, Norway, Oman, Portugal, Qatar, Republic of Korea, Spain, Syria, Switzerland, Tunisia, United Arab Emirates, Uruguay, Viet Nam and Zimbabwe.

5. The following working paper was submitted to the Ad Hoc Committee at this annual session: CD/SA/WP.13 dated 6 August 1991 entitled "Paper presented by Egypt on security assurances for non-nuclear-weapon States against the use or threat of use of nuclear weapons".

III. Substantive work

6. The Group of 21 stated that the issue of effective international arrangements to assure non-nuclear-weapon states against the use or threat of

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use of nuclear weapons was one of cardinal importance since it was symbiotically linked to, and touched upon, the fundamental security of all states. It recalled General Assembly resolution 45/54 which had recommended that the Conference on Disarmament actively continue intensive negotiations with a view to reaching early agreement and concluding effective international arrangements to assure non-nuclear-weapon states against the use or threat of use of nuclear weapons, taking into account the widespread support for the conclusion of an international convention and giving consideration to any other proposals designed to secure the same objective. The Group reiterated that, every effort should be exerted to construct an edifice of multilateral disarmament agreements to replace worn out theories and decayed strategies. Such an edifice would remain incomplete if comprehensive legally binding assurances from the nuclear weapon states were not allocated to all non-nuclear weapon states since they had voluntarily renounced the nuclear option. The Group of 21 regretted the lack of agreement and progress in this field despite the cardinal importance attached to the work of this Committee.

7. The Group of 21 felt that there was agreement amongst the majority of the Member States of the United Nations to the idea of an international convention to reach agreement on effective international arrangements to assure non-nuclear-weapon States against the use or threat of use of nuclear weapons. This has been borne out by what had been embodied in successive resolutions of the United Nations General Assembly. The Group expressed an opinion that these resolutions reaffirmed the urgent need to reach an agreement on effective international arrangements to assure non-nuclear-weapon States against the use or threat of use of nuclear weapons; appealed to all States, especially the nuclear weapon States, to demonstrate the political will to reach an agreement on a common formula that could be included in an international instrument of a legally-binding character and recommended that the CD should actively continue negotiations on this subject, including the consideration of any other proposals designed to secure the objective before it.

8. The same Group was of the view that these resolutions should form the starting point of the Committee's negotiations and that the general consensus on the common formula approach should not be undermined and efforts should be made to resume the search for an agreeable solution from that point.

9. One delegation belonging to the Group of 21, whose views were shared by other delegations of the same Group, stated that the only credible guarantee against the use or threat of use of nuclear weapons lay in nuclear disarmament and the elimination of such weapons. To this end, it had proposed the

conclusion of an international agreement prohibiting the use or threat of use of nuclear weapons and instead of agreeing upon partial pledges of non use, this treaty had to be negotiated pending complete nuclear disarmament. It had, however, supported a legally-binding and multilaterally-negotiated international instrument for providing security assurances to non-nuclear weapon states, which should be clear, credible, universal and without any qualifications or discrimination. This, in turn, necessitates that such an instrument be based on a "common formula" approach. NSAs cannot be predicated upon, nor can they be used as a pretext for demanding discriminatory obligations or "reciprocal guarantees" from non-nuclear weapon states, thus further adversely affecting their already threatened security. The nuclear-weapon States had an obligation to assure and the non-nuclear weapon States had the right to be assured against the use or threat of use of nuclear weapons.

10. One member of the same Group underlined the responsibility of the UN in maintaining international peace and security which had guided the Security Council to adopt its resolution 255 in 1968 on questions relating to measures to safeguard non-nuclear-weapon states parties to the NPT, especially because the NPT did not contain a clause providing for security assurances to non-nuclear-weapon states. It felt that the resolution adopted more than 23 years ago needed an update by adopting a revised version that would contain credible assurances. It considered that a first step was necessary to initiate a process whereby nuclear-weapon states party to the NPT would conduct consultations collectively or individually with the nuclear weapon states not currently party to the Treaty on security assurances taking into account UN Security Council Resolution 255 of 1968 and to inform other states party to the Treaty of any progress or appropriate action taken by the Security Council as a result of these efforts. These views were contained, inter alia, in the paper presented by this delegation to the Ad Hoc Committee this year.

11. One delegation from the same Group indicated that the concept of negative security assurances should now be discussed in the light of the improved climate. It felt that to suggest that states which had relinquished the nuclear option in a legally-binding manner to the NPT be content with unilateral security assurances was possibly to undermine the sobriety of such states. It believed that insistence upon conditional assurances which placed parties and non-parties to the NPT on the same footage might be unrealistic and unattainable and possibly disruptive.

12. One delegation, a member of the Group of 21, expressed the view that credible security assurances to non-nuclear weapon States against the use or

threat of use of nuclear weapons were an essential element of an effective and equitable regime to prevent the proliferation of nuclear weapons. Such assurances should be without qualification, not subject to divergent interpretation and unlimited in scope, application and duration. The guarantees to be extended to the non-nuclear weapon States also should be based on a single "common formula" on which agreement exists, as was reflected in numerous resolutions on the subject adopted by the UN General Assembly over the years. At the same time the delegation was opposed to the "categorization" approach pursued by some countries, as this would complicate the search for a "common formula". The delegation reiterated that the obligation of the nuclear-weapon States not to use or threaten to use nuclear weapons against non-nuclear-weapon States should be categorical and unambiguous. Security assurances to non-nuclear-weapon States should be extended in an international instrument of a legally-binding character, which could take various forms. However, unilateral declarations of the nuclear-weapon States would not create the legal commitments that were essential for any credible arrangement to assure the non-nuclear-weapon States because unilateral declarations, no matter how solemnly made were, after all, statements of governmental policy and could be changed or withdrawn unilaterally. Finally, that delegation stated that negative security assurances were only a first step towards the complete prohibition of the use of nuclear weapons and as a part of the efforts to achieve nuclear disarmament.

13. One delegation belonging to the Group of 21 also expressed the view that the only prerequisite to receive security assurances was the non-possession of nuclear weapons, and there should be no other conditions attached to the extension of such guarantees by the nuclear-weapon States. It stated that it had never accepted the logic behind the policies of nuclear deterrence. An agreement concerning NSAs should be based on the relevant UN resolutions.

14. Some delegations of the Group of 21 expressed their regret that the work of the Committee had yet to benefit from the new international climate. They said that there had been little substantive work and urged the nuclear-weapon States to submit individually or collectively specific proposals in order that negotiations could begin. For those delegations the lack of progress was due to the absence of political will of some delegations.

15. The Western nuclear-weapon States said the kind of political will needed was recognition by some members of the Group of 21 that the specific proposals offered by members of the Western Group during the 1991 session were serious and should be dealt with as such. Proposals and political will were required by all in order to further the work of the Committee.

16. Some delegations belonging to the Group of Eastern European and other states, including the delegation of a State possessing nuclear weapons, reiterated their position that nuclear disarmament and the complete elimination of nuclear weapons represented the most effective and promising guarantee against the use or threat of use of nuclear weapons. Until then States not possessing nuclear weapons and not having them on their territory should have appropriate reliable international legal guarantees against the use or threat of use of these weapons. Some delegations belonging to the Group of Eastern European and other states, including the delegation of a State possessing nuclear weapons, noted that to achieve a substantive progress in this respect a political will and constructive approach should be demonstrated by all. Expressing readiness to participate actively in the search for solutions based on a common formula and agreeing with the approach of the delegations that give their preference to a multilateral international document of a binding character as compared to unilateral statements, these delegations expressed the view that it was necessary to consider similar or intermediate measures that would contribute to the creation of sound, clear-cut and genuine guarantees for the non-nuclear-weapon States based on a balance of interests of all States concerned. Such intermediate measures, according to them, could include the prohibition of the use of nuclear weapons against all States - including those that had no such weapons; the creation of nuclear-weapon-free zones as an effective means of ensuring the necessary prerequisites for nuclear-weapon States to assume obligations not to use nuclear weapons against States belonging to such zones. They referred also to the unilateral statements of two nuclear-weapon States that they would not be the first to use nuclear weapons.

17. One delegation from the same Group suggested that an interim solution could be based on the "lowest common denominator" of the five existing non-use declarations which meant that if non-nuclear-weapon states party to the NPT, not parties to an alliance and not stationing foreign nuclear weapons, could confirm in a NSA legal instrument its non-attack obligation assumed under article 2(4) of the UN Charter, they might well enjoy legally-binding assurances. Such an interim arrangement might strengthen the security of the majority of non-nuclear-weapon States and could become an important step ahead. The delegation thought that the Committee could not follow a realistic and pragmatic "single common formula" approach and at the same time insist on covering all non-nuclear weapon States by the respective security assurances.

18. The Western Group stated that it continued to attach importance to the question of Negative Security Assurances and recognized their role as a means of enhancing international security. It was the view of all members of this

Group that unilateral commitments made by the three nuclear States of the Group, although not enshrined in a formal treaty, were firm commitments based on realistic considerations. Although they were worded differently, their spirit and the aim they pursued were identical. In practice, most non-nuclear weapon States should find themselves covered by these assurances as indeed they might well be covered by all five unilateral statements. The Western Group was convinced that the most recent developments, especially in the East-West context and in Europe might offer some prospects for furthering the discussions. It stressed that one of the central elements of these developments was the joint reaffirmation of mutual commitment of non-aggression enshrined in the UN Charter. The Group believed that these developments not only showed how rapid change could be and how advanced was the process of cooperation in Europe, but it was the conviction of the Group that such an approach could be useful to other regions. It therefore invited all States to examine the possibility to adopt initiatives taking into account particular characteristics of each region which should lead to stability and security for all participating States. In particular, the establishment of Nuclear Weapon Free Zones in appropriate areas could contribute to the settlement of regional tensions and disputes. This Group continued to be ready to examine carefully various ways of tackling the question of security assurances in a constructive way and in other appropriate fora. The Group recalled that legally-binding commitments could also be undertaken through the NPT, through regional arrangements such as the Treaty of Tlatelolco and the Treaty of Rarotonga or by an arrangement with the IAEA. The Group considered as particularly useful those proposals before the Committee, which recognized the necessary balance between binding and effective non-proliferation undertakings on the one hand and binding security assurances on the other hand.

19. One delegation, member of the Western Group, recommending a realistic approach to this agenda item, indicated that because the possible use of nuclear weapons, as well as their deterrent role, was still a component of the military doctrines of some nuclear-weapon States the eventual total elimination of nuclear weapons could only remain a longer term objective. Moreover, the wish to obtain agreement from the five nuclear-weapon states on a common formula could only be achieved if all five of them could agree among themselves on what should be the components of that common formula. It also stated that even though this item had been on the CD agenda since 1979, the time was still not ripe to resolve it in the way that many states favouring a common formula would clearly prefer. The best way to advance the work should be through further discussion and the patient analysis of ideas that would appear to have some chance of being accepted by the nuclear-weapon states.

Instead of repeated merely rhetorical calls for a common formula only by exploring with them what they would be prepared to accept would any progress be likely.

20. Another delegation, a member of the Western Group, said that although NSAs are not in themselves concrete arms control or disarmament measures, they could enhance international security. It identified several key factors relevant to consideration of the issue of NSAs and specifically the importance of several existing international, particularly regional, legal instruments as means for giving more legal weight to the political commitments inherent in the various unilateral nuclear NSA declarations. In the context of this last factor, this same delegation urged all nuclear weapon states which had not done so to sign additional protocol II of the South Pacific Nuclear Free Zone Treaty.

21. The delegation of one Western nuclear-weapon State stressed the importance of a balance between, on the one hand, a legally-binding commitment by the nuclear-weapon States not to threaten to use or to use nuclear weapons against non-nuclear-weapon States, and on the other hand, a legally-binding commitment by such States not to develop, produce or acquire nuclear weapons. It moreover stated that any legally-binding assurance should be applicable to all non-nuclear-weapon States irrespective of their membership in a military alliance or of the stationing of nuclear weapons on their territories, but not to any non-nuclear weapon State which would associate itself in any way to a nuclear attack against a nuclear weapon State.

22. One nuclear-weapon State was of the view that the most effective security guarantee for non-nuclear-weapon States against the use or threat of use of nuclear weapons was the complete prohibition and total elimination of nuclear weapons. Pending the achievement of this goal, all nuclear-weapon States should undertake not to use or threaten to use nuclear weapons against non-nuclear-weapon States and nuclear-weapon-free zones under any circumstances. It reiterated its commitment that at no time and under no circumstances would it be the first to use nuclear weapons, and that it would not use or threaten to use nuclear weapons against non-nuclear-weapon States. It expressed its support for the conclusion of an international convention which could genuinely prevent the use or threat of use of nuclear weapons against non-nuclear-weapon States and nuclear-weapon-free zones. It also stated that it would welcome any constructive initiative agreeable to non-nuclear-weapon States.

IV. Conclusions and recommendations

23. The Ad Hoc Committee reaffirmed that non-nuclear-weapon States should be effectively assured by the nuclear-weapon States against the use or threat

of use of nuclear weapons pending effective measures of nuclear disarmament. Work on the substance of the effective arrangements and discussion on various aspects and elements of a solution, together with the series of informal consultations by the Chairman revealed that specific difficulties relating to differing perceptions of security interests of nuclear-weapon States and non-nuclear-weapon States continued to persist and that the complex nature of the issues involved continued to prevent agreement on a 'common formula'. The formal debates and informal consultations demonstrated the readiness of delegations to continue the search for a common approach on the substance of negative security assurances and, in particular, on such a 'common formula'.

24. Against this background the Ad Hoc Committee recommends to the Conference on Disarmament that ways and means should continue to be pursued in the light of the on-going and future developments to overcome the difficulties encountered in its work in carrying out negotiations on the question of effective international arrangements to assure non-nuclear-weapon States against the use or threat of use of nuclear weapons. Accordingly, it was generally agreed that the Ad Hoc Committee should be re-established at the beginning of the 1992 session.

CONFERENCE ON DISARMAMENT

CD/1105
23 August 1991

Original: ENGLISH

REPORT OF THE AD HOC COMMITTEE ON PREVENTION OF AN ARMS RACE IN OUTER SPACE

I. INTRODUCTION

1. At its 582nd plenary meeting on 14 February 1991, the Conference on Disarmament adopted the following decision:

"In the exercise of its responsibilities as the multilateral disarmament negotiating forum in accordance with paragraph 120 of the Final Document of the First Special Session of the General Assembly devoted to disarmament, the Conference on Disarmament decides to re-establish an Ad Hoc Committee under Item 5 of its agenda entitled 'Prevention of an arms race in outer space'.

The Conference requests the Ad Hoc Committee, in discharging that responsibility, to continue to examine, and to identify, through substantive and general consideration, issues relevant to the prevention of an arms race in outer space.

The Ad Hoc Committee, in carrying out this work, will take into account all existing agreements, existing proposals and future initiatives as well as developments which have taken place since the establishment of the Ad Hoc Committee, in 1985, and report on the progress of its work to the Conference on Disarmament before the end of its 1991 session."

2. In that connection a number of delegations made statements regarding the scope of the mandate.

II. ORGANIZATION OF WORK AND DOCUMENTS

3. At its 582nd plenary meeting on 14 February 1991, the Conference on Disarmament appointed Ambassador Roberto García Moritán of Argentina as Chairman of the Ad Hoc Committee. Mr. Vladimir Bogomolov, Political Affairs Officer, United Nations Department for Disarmament Affairs, served as the Committee's Secretary.

4. The Ad Hoc Committee held 17 meetings between 26 February and 20 August 1991.
5. At their request, the Conference on Disarmament decided to invite the representatives of the following States not members of the Conference to participate in the meetings of the Ad Hoc Committee: Austria, Chile, Colombia, Costa Rica, Denmark, Finland, Greece, Ireland, Malaysia, New Zealand, Norway, Oman, Portugal, Senegal, Spain, Switzerland, Syria, Turkey, United Arab Emirates, Uruguay, Viet Nam and Zimbabwe.
6. In addition to the documents of the previous sessions 1/, the Ad Hoc Committee had before it the following documents relating to the agenda item submitted to the Conference on Disarmament during the 1991 session:

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| CD/1059 | Mandate for an Ad Hoc Committee under item 5 of the agenda of the Conference on Disarmament entitled "Prevention of an Arms Race in Outer Space". |
| CD/1073 | Letter dated 12 March 1991 addressed to the Secretary-General of the Conference on Disarmament from the Permanent Representative of Canada, transmitting compendia on Outer Space comprising plenary statements and working papers from the 1990 session of the Conference on Disarmament. |
| CD/1087 | Letter dated 8 July 1991 addressed to the President of the Conference on Disarmament from the Deputy Representative of the United States to the Conference on Disarmament transmitting a statement delivered on 25 June 1991 by Ambassador David J. Smith, Chief United States Negotiator for the Defence and Space Talks in the Ad Hoc Committee on Prevention of an Arms Race in Outer Space of the Conference on Disarmament. |
| CD/1088 | Letter dated 27 June 1991 addressed to the Secretary-General of the Conference on Disarmament from the Permanent Representative of Canada, transmitting the Arms Control Verification occasional paper No. 7, entitled "Satellites Harming Other Satellites." |
| CD/1095 | Letter dated 5 August 1991 addressed to the Secretary-General of the Conference on Disarmament from the Permanent Representative of Canada, transmitting the Arms Control Verification Occasional Paper No. 6, entitled "Overhead Imaging for Verification and Peacekeeping: Three Studies". |
| CD/OS/WP.43 | Programme of Work. |

1/ The list of documents of the previous sessions may be found in the 1985, 1986, 1987, 1988, 1989 and 1990 reports of the Ad Hoc Committee, and in the special report to the third special session of the General Assembly devoted to disarmament (CD/642, CD/732, CD/787, CD/870, CD/834, CD/956 and CD/1039, respectively).

- CD/OS/WP.44 Working paper entitled "Status of Treaties Relating to Space Activities", submitted by the Secretariat.
- CD/OS/WP.45 Working paper entitled "The concept of confidence-building and predictability measures in space activities of States", submitted by the Soviet Union.
- CD/1092
CD/OS/WP.46 Working paper entitled "Prevention of an arms race in outer space: Confidence Building Measures and Transparency", submitted by France.
- CD/OS/WP.47 Working paper entitled "The Problem of Debris and Military Activities in Space", submitted by Italy.
- CD/OS/WP.48 Working paper entitled "Confidence and Security Building in a Protection Regime for Outer Space", submitted by Germany.
- CD/OS/WP.49 Working paper entitled "Terminological issues relevant to the prevention of an arms race in outer space", submitted by the Friend of the Chairman, The Hon. A. Monckton of the United Kingdom of Great Britain and Northern Ireland Delegation
- CD/OS/WP.50 Working paper entitled "Issues related to ASATs", submitted by the Friend of the Chairman, Dr. M. Karem of the Delegation of Egypt
- CD/OS/WP.51 Working paper entitled "Confidence-building measures in space activities", submitted by the Friend of the Chairman, Mr. M. Antuykhin of the Delegation of the Union of Soviet Socialist Republics

III. SUBSTANTIVE WORK DURING THE 1991 SESSION

7. Following an initial exchange of views and consultations on the programme and organization of work held by the Chairman with various delegations, the Ad Hoc Committee, at its 1st meeting on 26 February 1991 adopted the following programme of work for the 1991 session:

- "1. Examination and identification of issues relevant to the prevention of an arms race in outer space;
2. Existing agreements relevant to the prevention of an arms race in outer space;
3. Existing proposals and future initiatives on the prevention of an arms race in outer space.

In carrying out its work with a view to finding and building upon areas of convergence, the Ad Hoc Committee will take into account developments which have taken place since the establishment of the Committee in 1985."

8. With regard to the organization of work, the Ad Hoc Committee agreed that it would give equal treatment to the subjects covered by its mandate and specified in its programme of work. Accordingly, the Committee agreed to

allocate the same number of meetings to each of those subjects, namely, issues relevant to the prevention of an arms race in outer space, existing agreements and existing proposals and future initiatives. It was noted that any member wishing to do so may discuss any subject important and relevant to the work of the Committee.

9. The work of the Ad Hoc Committee was governed by the mandate which aims at the prevention of an arms race in outer space.

10. A general exchange of views was held during the 17 meetings which the Ad Hoc Committee devoted to substantive work including the presentation and examination of specific proposals for measures. All the delegations welcomed the prompt re-establishment of the Ad Hoc Committee and the new methodological approach applied.

11. To enhance the functioning of the Committee in qualitative terms during the first part of the annual session three non-binding indicative lists of topics based on the main aspects considered in 1990 were circulated by the Chairman. The debate in the Committee dealt inter alia with the subjects referred to in the Chairman's lists of topics relating to the three items on the programme of work and attached in the Annex.

12. In the second and third part of the annual session the work of the Committee was facilitated through the assistance of Friends of the Chairman who were appointed to deal with the following specific issues in open-ended consultations:

- a) terminological aspects related to prevention of an arms race in outer space (The Hon. Anthony Monckton, Delegation of the United Kingdom of Great Britain and Northern Ireland)
- b) issues related to verification of ASATs (Dr. M. Kareem, Delegation of Egypt)
- c) confidence-building measures including improvement of existing and future databases relating to space activities (Mr. M. Antuykhin, Delegation of the USSR)

Each Friend of the Chairman presented, at the end of the session, a report containing the preliminary outcome of those consultations. Those reports are contained in the following working papers:

CD/OS/WP.49 entitled "Terminological issues relevant to the prevention of an arms race in outer space"

CD/OS/WP.50 entitled "Issues related to ASATs"

CD/OS/WP.51 entitled "Confidence-building measures in space activities"

It was understood that those reports were presented by the Friends of the Chairman under their own responsibility, without prejudice to positions of

delegations, with the aim of facilitating any future consideration of the issues.

13. The Committee also benefitted from the scientific and technical contributions of experts from various delegations who addressed the specific issues and initiatives under consideration in the Committee relevant to the prevention of an arms race in outer space.

A. Examination and identification of issues relevant to the prevention of an arms race in outer space

14. There was general recognition of the importance of the bilateral negotiations between the Union of Soviet Socialist Republics and the United States of America and it was stressed that bilateral and multilateral efforts were complementary. Many delegations emphasized that those negotiations did not diminish the urgency and the importance of multilateral efforts and reaffirmed that, as provided for in General Assembly resolution 45/55A, the Conference on Disarmament, as the single multilateral disarmament negotiating forum, had the primary role in the negotiation of a multilateral agreement or agreements, as appropriate, on the prevention of an arms race in outer space in all its aspects.

15. The Group of 21 considered that there was an urgent need to address this important agenda item so as to achieve progress. For this reason, the Group took a flexible position on the question of the programme of work although it would have preferred the Committee to work under a negotiating mandate. It was felt that the new methodology applied to the work of the Committee would create new opportunities to advance from generality to specificity, allowing the Committee to enhance its functioning in qualitative terms.

16. The Group of Western States welcomed the adoption of the same programme of work as in the previous years and equal allocation of time between the three main items of the programme of work. It thought that this formal framework implemented with due flexibility provided the best structure for the discussions while enabling each delegation that so wished to express its position and to make a contribution to the common search for areas of convergence envisaged in the programme of work.

17. Many delegations of the Group of 21 underlined that in an era where the confrontation between the United States and the Union of Soviet Socialist Republics had eased, other states on planet earth had reasons to hope that arms deployed on ground would not be supplemented with a threat from space that would provoke a counter and help in spiralling the arms race further into outer space.

18. Many delegations reiterated that outer space was the common heritage of mankind and as such should be used exclusively for peaceful purposes, thus making it of vital importance to prevent an arms race in outer space. They pointed out that to date the Conference had performed useful work in identifying and clarifying the various aspects of this complex item and had before it numerous proposals aimed at perfecting the existing legal régime. In their view, the Conference should urgently fulfil its role by elaborating new instruments of a legal character which would, in an all-embracing and multilateral way, tackle the issue of the non-militarization of outer space.

19. Some delegations belonging to the Group of Eastern European and other States reiterated that the issues of prevention of an arms race in outer space by joint efforts of all members of international community had a key meaning for international security and for strengthening of strategic stability. They considered necessary to provide on this track of disarmament a fruitful combination of multilateral and bilateral approaches. In their view, at the present time, the Conference on Disarmament was the most appropriate forum for arrangements to keep outer space free from weapons.

20. One delegation of the Western Group, having recalled the interpretation of the 1967 Outer Space Treaty according to which that instrument did not prohibit all military activities in space, stated that some stabilizing military activities deserved to remain authorized. Besides, it was sometimes impossible to distinguish some civil activities from military ones. Therefore, it was preferable to concentrate on the prevention of any aggressive use of space. Moreover, that delegation stressed the difficulties of a comprehensive prohibition of antisatellite weapons as such, since any space objects and ballistic missiles, as well as many ground-based systems, had potential antisatellite capabilities.

21. One delegation of the Group of 21 pointed out that "peaceful" could not be equated with non-aggressive and it could only be interpreted to exclude "military uses".

22. One delegation belonging to the Western Group said that the role of the Ad Hoc Committee and that of UNCOPUOS were separate and distinct. If the Ad Hoc Committee was to make any progress the same delegation suggested that two areas merited further study: definition and verification. A glossary of terms and definitions would provide the Committee with a more solid foundation for its discussions. Equally no arms control agreement in space could hope to be sustainable without effective verification.

23. One delegation not belonging to any Group held the view that the prevention of an arms race in outer space and the peaceful utilization of it was the common aspiration of mankind. It reiterated that its State had all along been opposed to the arms race in outer space and stood for the complete prohibition and thorough destruction of all kinds of space weapons. It pointed out that in spite of the preliminary achievements in the nuclear and conventional disarmament, the arms race in outer space between the two major space powers had not ended but on the contrary had taken on a new trend. Hence preventing an arms race in outer space had become a major task in the field of disarmament. In its view the arms race in outer space based on the latest development in science and technology was a qualitative escalation of the arms race in nature, which not only posed a threat to international peace and security but was also detrimental to the activities aimed at the peaceful use of outer space. Furthermore, it considered that it would have an adverse effect on the disarmament process. Confronting with such a reality it stood to reason for the international community to demand that the two countries with the largest space capabilities bear special responsibilities in preventing an arms race in outer space. It took note of the bilateral negotiations on space issues between the two major space powers and pointed out that so far nothing substantive had been achieved. It held the view that in order to effectively prevent an arms race in outer space it was necessary that the two countries with the largest space capabilities should immediately adopt practical measures in undertaking not to develop, test and deploy any types of space weapons and destroy all the existing ones, including both anti-ballistic missiles and anti-satellite weapons, and on the basis of this, conduct serious negotiations with a view to concluding an agreement that completely bans all space weapons. While stressing the importance of the existing international legal instruments, it pointed out their insufficiency as well as the need to negotiate new international legal instruments. It stated that as the sole multilateral forum of disarmament negotiations, the Conference on Disarmament should start as soon as possible negotiations on an international convention on the complete prohibition of outer space weapons and on the prevention of arms race in outer space.

24. The Group of 21 emphasized the need for in-depth treatment of matters under item 3 of the work program "Existing proposals and future initiatives on the prevention of an arms race in outer space".

25. Members of the Group of 21 having brought up certain comprehensive proposals, pointed out that there was a need to further analyse limitations of

article IV of the Outer Space Treaty under the perspective of the régime applicable to outer space as distinct from the one confined to the moon and other celestial bodies. Some proposals related to an amendment of the Outer Space Treaty and to transforming it into a comprehensive Treaty.

26. As to confidence-building measures, the Group of 21 recalled United Nations General Assembly resolution 45/55 B, which reaffirms the importance of confidence-building measures as a means conducive to ensuring the attainment of the objective of the prevention of an arms race in outer space and recognizes their applicability in the space environment under specific criteria yet to be defined.

27. According to many delegations there appeared to be a general recognition that the Committee could usefully consider confidence-building measures including data-base improvements relevant to the mandate of the Committee and in consonance with evident complementarities of bilateral and multilateral efforts in this area.

28. Members of the Group of 21 consistently addressed the question of a comprehensive ban of anti-satellite weapons, including a ban on testing in an ASAT mode of other weapons devices. In the context of measures pertaining to ASATs while recognizing the verification challenges connected with measures to prevent an arms race in outer space, the Group of 21 found it logical that these issues became the subject of more concrete deliberations and negotiations. The Group suggested that it might be useful in that connection to address the question of identifying technical means to support observation and verification functions pertaining to different relevant measures.

29. On the subject of immunity of satellites many delegations stressed an increasingly important role of satellites in a variety of fields. For these delegations the spread of satellite technology had generated enormous opportunities for developments in the field of economic growth and international security and it was imperative that the international community safeguard the increasing positive developments of satellite technology on an urgent basis. It was acknowledged by those delegations that some amount of immunity had been provided to satellites by the 1967 Outer Space Treaty in relationship with Article II, paragraph 4 of the UN Charter. Under bilateral agreements between the United States and the Union of Soviet Socialist Republics protection was also provided by prohibiting interference with national technical means. This régime was on the one hand limited in scope and on the other not universal. Further development of a regime providing for immunity of satellites would not run contrary to the UN Charter.

B. Existing agreements relevant to the prevention of an arms race in outer space

30. Much attention was paid to the principles and provisions of international law relevant to the prevention of an arms race in outer space. Some delegations of the Western Group underlining the central role of the Charter of the United Nations stressed the special significance of paragraph 4 of Article 2 and Article 51. They emphasized that Article 2(4) prohibited the threat or use of force against the territorial integrity or political independence of any State. Complementing Article 2(4), Article 51 permitted States to exercise their inherent right of individual or collective self-defense. These delegations thus concluded that when read together, these two Charter provisions strictly prohibited the use of force in all instances except for individual or collective self-defense.
31. Many delegations recalled that the Outer Space Treaty was a response to the challenges that space technology created in the 1960s. Some of them stressed that the first paragraph of article IV of the Treaty, represented a legal loophole exploited by some space powers to develop a new generation of weapons that could be placed in outer space. There was almost unanimous recognition of the fact that the legal régime did place some limitations on certain weapons and military activities in outer space. However it was equally emphasized that existing legal instruments left open the possibility of the introduction of weapons in space, other than nuclear weapons or other weapons of mass destruction.
32. One delegation of the Group of 21 stated that the Outer Space Treaty of 1967 banned nuclear weapons and other weapons of mass destruction from space. However, there was no legal bar at present to the development of large lasers that some would hope could eventually be capable of countering missiles in their boost phase.
33. Many delegations reiterated that the present legal régime governing outer space was not adequate to guarantee the prevention of an arms race occurring in outer space. It was noted that General Assembly resolution 45/55A recognized the urgency of preventing an arms race in outer space and requested the Conference on Disarmament to undertake negotiations for the conclusion of binding agreement or agreements, as appropriate. While recognizing the significant role played by that régime and the need to consolidate and strengthen it and its effectiveness, several delegations called for the total prohibition of the development, production, stationing, stock-piling and use of space weapons and the destruction or transformation of existing weapons.

34. One delegation of the Western Group believed that the existing legal régime for arms control in outer space was equitable, balanced and extensive. The current regime placed some legal restraints on virtually every type of weapon in outer space and recurring predictions of an impending arms race in outer space had not been borne out. Therefore the allegations of its insufficiency were overstated. A legal régime, in and of itself, was not sufficient to prevent an arms race in outer space because one needed compliance with that régime, its enforcement and participation in that régime.

35. One delegation of the same Group, while recognizing that the existing legal régime was insufficient to prohibit some potentially threatening activities and was partially based on bilateral agreements subject to different interpretations or withdrawal, affirmed that the prohibition to deploy any weapon in space would be neither realistic nor efficient: it could indeed limit some stabilizing activities and at the same time would not take account of the other threats to space activities.

C. Existing proposals and future initiatives on the prevention of an arms race in outer space

36. The Group of 21 recalled its proposal for the Ad Hoc Committee to have a negotiating mandate. The Group held the position that the Committee should focus on concrete proposals for measures with a view to conducting negotiations for the conclusion of an agreement or agreements, as appropriate, to prevent an arms race in outer space in all its aspects.

37. Some delegations of the Western Group, while agreeing to discuss and study the proposals put forward before the Committee, considered that political conditions were not ripe for in-depth negotiations on these proposals, or were not convinced that they were suitable areas for multilateral consideration.

38. It was stressed by some delegations that although so far no armed conflict in outer space had taken place, mankind could not shut the eyes to history and to scientific and technological developments that were taking place and presume that there would not be any such incident in the future. The importance of what had been left uncovered by the Outer Space Treaty and other related measures two decades ago had grown and the shortcomings had become strikingly more evident.

39. One delegation, a member of the Group of 21, stressed that Article IV of the Outer Space Treaty, contained a built-in limitation, as its scope did not extend to banning all types of weapons in outer space. It prohibited inter alia, the placing, installing or stationing of nuclear weapons and other

weapons of mass destruction only. Its provisions did not therefore contain a clear-cut injunction to ensure that outer space is used exclusively for peaceful purposes. In the view of this delegation the principle of exclusive use for peaceful purposes applied only to the Moon and other celestial bodies and the only restriction placed on States parties pertained to the prohibition of the establishment of military bases, installations and fortifications, the testing of any type of weapon and the conduct of military manoeuvres on celestial bodies. The delegation considered that this meant that there was an inherent contradiction in the same article of the Treaty, thereby creating as a result not one but two legal régimes - one applicable to outer space and the other confined to the Moon and other celestial bodies. Therefore it was of the view that the general objective should aim at establishing one legal régime for outer space as well as the Moon and other celestial bodies. It maintained that this could only be realized through a clear-cut provision declaring that outer space shall be used exclusively for peaceful purposes.

40. One delegation reiterated its proposal contained in document CD/851 seeking to amend Article IV of the Outer Space Treaty. It stressed that the proposal was aimed to fill in an important juridical vacuum in the Outer Space Treaty and to prevent the stationing in outer space of weapons other than nuclear and mass destruction weapons.

41. Many delegations of the Group of 21 touched upon the destabilizing aspects of ballistic missile defences. The development, testing and deployment of active space systems, i.e. weapons with direct destructive effects to be used for anti-ballistic or ASAT tests, would run counter to the spirit of the Outer Space Treaty. An ASAT test-ban appeared to be the most effective way of rendering protection to satellites, in comparison with ideas such as creating immunity to the space segment of a satellite system as well as to areas surrounding a satellite. This could also have the advantage of leaving a way out with respect to the difficult questions pertaining to defining the functions of satellites, which might be of dual civil and military character, or could be supportive of both passive and active military systems. It had been proposed by many delegations that the present de facto moratorium by the two major space powers on testing of existing dedicated ASAT-systems, should be formalized. Furthermore, a banning of non-dedicated weapons devices would have to be directed at the testing of such weapons devices in an ASAT-mode. Such a functional approach had had a precedence in the ABM Treaty, which had referred to "testing in an ABM mode". When dealing with identification of technical means to support observation or verification

functions, this could be done in relation to confidence-building measures, leading to more concrete measures to prevent an arms race in outer space.

42. In connection with the reiteration of some proposals for a comprehensive ASAT ban, one delegation of the Western Group stated that it did not believe that verification schemes proposed to date were adequate for this purpose. A key problem was verifying compliance with such an agreement. Another problem concerned the legal issue of how ASAT weapons should be defined and categorized. The delegation reiterated that the existing legal regime placed a wide variety of legal restraints on the nature, deployment and uses of ASATs. It stated that conventionally-armed ASAT weapons that lacked an ABM capability and that were not armed with nuclear weapons were currently not limited by any arms control agreement.

43. Some delegations of the Group of 21 stated that not only were national technical means of verification adequate to detect and verify testing of space weapons in an ASAT mode including the "direct ascent attack mode" but a mutually agreed definition of dedicated ASAT weapon did exist. Once listing of directed energy weapons like ground-based lasers which were a threat to satellites is fully under way, more complex understandings would need to be negotiated. The unconstrained development of ASAT systems was a means of avoiding the limits on BMD development set by the ABM treaty. If lasers could be construed in terms of total brightness, their potential to attack satellites in high orbit would be controlled. It was easily conceivable to impose first use limitations, rules-of-the-road agreements and limited capability restriction on ASATs like dismantling of existing systems and test limits. These elements needed to be put together for a comprehensive ban on satellite intercept capability, which would mean restricting military space activities or undertaking them cooperatively, prohibiting all forms of anti-satellite defences, satellite ballistic missile defence and many offensive and laser systems.

44. One delegation reiterated its proposal (contained in CD/939) to amend Article IV of the Outer Space Treaty so as to make its prohibition applicable to any kind of weapons and to contemplate the negotiation of an Additional Protocol for the purpose of prohibiting the development, production, storage and deployment of anti-satellite weapon systems which were not stationed in outer space. The proposal provided also for a second additional protocol to deal with the verification system to ensure faithful compliance with the obligations assumed by the States Parties.

45. Confidence-building and predictability measures of States' activities in

outer space found positive response of some delegations. In this connection, the concept of "open outer space" was further elaborated by one delegation belonging to the Group of Eastern European and other states. It was proposed that this concept should become a subject of consideration at the Conference on Disarmament. In the view of that delegation the key elements that could form the basis of a future multilateral agreement on confidence-building and predictability measures in space activities of States should include the following measures: 1) the strengthening of the 1975 Convention on Registration of Objects Launched into Outer Space; 2) the elaboration of "rules of the road" - "a code of conduct"; 3) the use of space-based monitoring equipment in the interest of the international community; and 4) the establishment of an International Space Inspectorate. The same delegation suggested that the elaboration of a set of confidence-building measures, transparency and predictability could be the most realistic initial step to keep outer space free from weapons. It circulated at the Committee a working paper entitled "The concept of confidence-building and predictability measures in space activities of States" (CD/OS/WP.45) which had integrated the ideas previously advanced at the Committee.

46. On the question of the functioning of the Registration Convention some delegations reiterated their proposals on the strengthening of the régime established by the Convention. They observed that by providing specific information about the nature and functions of objects launched into space, the Convention constituted an indispensable database for any subsequent development designed to generate confidence in the uses of outer space. These delegations also indicated that the changes in the régime should apply on two levels, one being the scope of the information to be provided and the other the timeliness. Additional parameters and information should be added to the items already present in article IV of the Convention and to that effect a duly mandated Expert Group under the auspices of the Ad Hoc Committee should be entrusted with the responsibility to devise those criteria.

47. Some delegations asserted that the need for data bases was felt by all delegations and the Registration Convention was a source that was now realised to be inadequate. They recalled that several proposals for the extension of data bases relating to space activities had been put forward by delegations from all Groups. Nothing in the Registration Convention prevented the CD or an expert group set up to assist the work of the Ad Hoc Committee as had been proposed by a number of delegations, from examining the information contained in the declarations under the Convention, which was a public registry.

48. In that connection one delegation of the Western Group remarked that although the topic "Registration Convention" was listed under the heading of CBM, the Convention, in its view, was not an arms control or confidence-building instrument. Wider adherence to the Convention and compliance with its current provisions would be the best way of strengthening it.

49. Many delegations touched upon the verification issues indicating that consideration of these questions would constitute an important and integral part of the Committee's work, given the technological, political, commercial and even doctrinal aspects involved in considering a strengthened outer space regime. They reiterated the importance of verification and the desirability of multilateral involvement therein.

50. One delegation, member of the Western Group, put forward views on verification and stated that the inability to construct a suitable and effective verification system could prevent agreements from being finalized. The move towards expanding arms control in outer space would require addressing carefully the problems stemming from the fact that space represented a relatively new medium and posed challenges for arms control, involving capabilities which could be entirely different from, but nevertheless interdependent with those employed on the earth's surface. Major verification problems were likely to arise as a result of the need for worthwhile space regimes to cover not only objects and activities in space but also those on the earth's surface related to space. Both environments should be considered in their interrelationship. This delegation noted that while many countries might have an interest in space, and would thus wish to be equal partners in any agreement, the technical capabilities necessary for satisfactory verification might be available to only a few.

51. Another delegation, also a member of the Western Group, added its support to the above-mentioned position saying that no arms control agreement in space could hope to be sustainable without verification. It suggested that it would be useful to evaluate the cost of some of the proposals already put before the Committee and to consider how these costs might be met.

52. The Head of a delegation to the bilateral Defense and Space Talks spoke to the Committee about the revised approach to ballistic missile defense called "Global Protection Against Limited Strikes" (GPALS). The GPALS shifted the focus of strategic ballistic missile defense away from deterrence of a strategic ballistic missile attack to protection against the emerging and limited ballistic missile threat. A GPALS defense would include various

sensors and three ground and space-based interceptors to ensure global coverage against missiles of all ranges. Any meaningful deployment of BMD would require a change in the legal regime established by the ABM Treaty. This State sought to negotiate within the Defense and Space Talks a cooperative transition to allow increased reliance on strategic BMD. This State continued to offer a mechanism to permit deployment of defenses beyond the ABM Treaty following three years' discussion of specific measures for implementing a cooperative transition.

53. Some delegations made reference to the ABM Treaty. One of them belonging to the Group of 21 noted that various political and technological factors posed important challenges and opportunities for the Treaty regime as it placed restrictions on testing weapons in an ABM mode but permitted weapons to be tested in an ASAT mode. It was due to this lacunae that "direct ascent attack" by ballistic missiles could be considered for offensive purposes. Under the existing legal systems pertaining to space, there was no clear provision that the premeditated development of space based ASAT weapons, or their components or even their stationing violated the law, especially that pertaining to the Outer Space Treaty. For the same delegation some recent experiments and strategic initiatives like the SDI and GPALs raised important questions about compliance with the ABM Treaty.

54. One delegation belonging to the Western Group in its expert presentation introduced the results of the research dealing with definitions and terminology which was called "Harmfulness Indexing" method. Its basic purpose was to attempt to quantify the effectiveness with which any space object could be used as a weapon. In the view of the delegation the method of quantifying harm was well suited to Article IX of the Outer Space Treaty. Another concept of vulnerability indexing dealt with the assessment of a spacecraft's vulnerability to any given threat. The harmfulness indexing methodology provided clues as to what made spacecraft harmful and how this might be regulated through arms control measures. The same delegation presented new approaches to the concept of keep-out zones (KOZ). Past suggestions for KOZ had focused on establishing protected volumes in space such as the concentric spherical shells called "space-fences", while the proposed concept of the "free space" KOZ involved two stipulations: satellites should remain outside the minimum keep away distance at all times and satellites might remain within the flyby distance for a period of time no longer than the maximum flyby time. The delegation viewed the creation of KOZ as an effective confidence-building measure. The installation of beacons on satellites was

suggested as a possible means of ensuring accurate data on their location relative to KOZ.

55. One delegation of the same Group recalled its proposal of a step-by-step approach, starting with the adoption, by the international community, of the principle of non-interference with non-aggressive space activities, which should form the basis of a régime of confidence-building measures. In a working paper (CD/1092 - CD/OS/WP.46) and in an expert presentation, it developed its proposal for the reinforcement of the 1975 Registration Convention, for rules of conduct for space objects, for measures of transparency and for an International Trajectory Centre. It also introduced a proposal for regional transparency agencies, providing for access to satellite imagery in the framework of regional agreements on confidence- and security-building measures.

56. The delegation of another Western State, in an expert presentation (contained in Document CD/WP/OS.48), also focussed on the confidence- and security-building aspects to be included in the provisions of a Protection régime for outer space. It considered that transparency and restraint in space activities should be promoted by a code of conduct supplemented by registration and notification measures linked to rules of the road for in-orbit space objects for better monitoring as well as to keep-out zones. Proposals for strengthening the requirements of registration and notification could be enhanced by pre-launch inspection of space objects. According to the expert, unlike weapon-related agreements, a Protection régime for outer space would allow a more general assessment of capabilities, with provisions which would differ considerably in terms of stringency and intrusiveness of monitoring. It would be possible to combine the three areas of declaratory, intentional and substantial confidence- and security-building measures.

57. Another Western delegation in an expert presentation briefed the Ad Hoc Committee on the possibilities of current and future space technologies for disarmament verification. The expert indicated that in order to achieve effective verification it could be advantageous to use a combination of mutually reinforcing methods in a staged approach. After a short survey of the present technical possibilities the expert spoke of the future of the verification-related space technology in Europe. In this respect he introduced the EUCLID Programme of the Independent European Programme Group (IEPG), and the Programme of the Western European Union (WEU). He stressed that a good cooperation among all the technical space, aerial and ground-based means could provide guarantees for the prevention of a new arms race.

58. An expert from another Western delegation addressed the problem of debris and military activities in space (CD/OS/WP.47, 2 August 1991) trying to assess the danger posed to artificial satellites by orbiting debris. He indicated that military activities in space constituted a large fraction of the total debris population and deployment and the testing of weapons in space would contribute to its further growth. To ensure safe space activity for all, including military operations, an international regime was called for. Some actions which could and should be taken about the debris problem were mentioned, including care about launch operations, keeping of the physical integrity of spacecraft, avoidance of deliberate fragmentation of spacecraft and rockets. It was underlined that plans for any space-based weapon system should be completely revised.

59. One expert from a delegation belonging to the Group of 21 addressed possibilities of monitoring testing of existing and potential ASAT weapons. A number of ways that satellites could be made inoperational were indicated. Among the future potential ASAT weapons mention was made of lasers, space mines, brilliant pebbles, high power microwaves, rail-guns, and neutral particle beams. It was said that during testing the characteristic parameters of weapons systems should show up. Among the various ways to monitor weapons and weapons testing photographic, heat detection, radar, electromagnetic fields detection, radiometric scattering, and probing techniques were discussed. Tagging was mentioned as one example of cooperative measures. With novel encryption techniques, very high degrees of security and authenticity could be obtained. Some of the non-dedicated ASAT weapons were said to be hypothetical in contrast to the monitoring techniques, which already had existed for some time in many cases, although an elaboration of these techniques in relation to a realization of the potential weapons concepts was claimed to be necessary.

IV. CONCLUSIONS

60. There continued to be general recognition in the Ad Hoc Committee of the importance and urgency of preventing an arms race in outer space and readiness to contribute to that common objective. The work of the Committee since its establishment in 1985 has contributed to the accomplishment of this task. The Committee held a wide ranging exchange of views and heard a number of expert presentations which contributed to identifying and clarifying a number of issues and to a clearer perception of the various positions. The Committee,

while aiming at identifying areas of convergence suitable for further structured work, advanced and further developed the examination and identification of various issues relevant to the prevention of an arms race in outer space. It was recognized once more that the legal régime applicable to outer space by itself did not guarantee the prevention of an arms race in outer space. There was again recognition of the significant role that the legal régime applicable to outer space played in the prevention of an arms race in that environment and of the need to consolidate and reinforce that régime and enhance its effectiveness and of the importance of strict compliance with existing agreements, both bilateral and multilateral. There was general recognition of the importance of the bilateral negotiations between the Union of Soviet Socialist Republics and the United States of America and it was stressed that bilateral and multilateral efforts were complementary. In the course of the deliberations, the common interest of mankind in the exploration and use of outer space for peaceful purposes was acknowledged. In this context, there was also recognition of the importance of paragraph 80 of the Final Document of the first special session devoted to disarmament, which stated that "in order to prevent an arms race in outer space, further measures should be taken and appropriate international negotiations held in accordance with the spirit of the Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and other Celestial Bodies". The Ad Hoc Committee continued its examination of existing proposals and gave a preliminary consideration to a number of new proposals and initiatives aimed at preventing an arms race in outer space and ensuring that its exploration and use will be carried out exclusively for peaceful purposes in the common interest and for the benefit of all mankind.

61. In the context of their contribution to the discussions on all aspects of the mandate and work programme, the importance of the presentations in the Committee relating to confidence-building measures and to greater transparency and openness in space made in the course of the 1991 session was recognized by the Committee. Although cognizant of the various positions on these matters the Committee also recognized the relevance of that discussion to the work of the Committee. The Committee also noted the valuable and significant contribution to this discussion of the experts from many delegations and expressed its appreciation to those delegations that provided those contributions. The Committee equally expressed its appreciation of the preliminary work done by the Friends of the Chairman, viewing the outcome of

their exercise as an encouraging development in the process of building upon the areas of convergence. The Committee recommended that this exercise be continued in 1992.

62. It was agreed that substantive work on this agenda item should continue at the next session of the Conference. It was recommended that the Conference on Disarmament re-establish the Ad Hoc Committee on the Prevention of an Arms Race in Outer Space with an adequate mandate at the beginning of the 1992 session, taking into account all relevant factors, including the work of the Committee since 1985.

A N N E X

The present Annex contains the lists of topics that were presented by the Chairman corresponding to each one of the three items of the Committee's Programme of Work. The lists were elaborated to enable the Committee to structure its deliberations in an orderly and systematic manner. They do not represent in this sense an agreed or exhaustive listing nor do they reflect an order of priority among the items. The lists of topics reflect the questions on which the Committee has been working thus far and that could constitute a guide for future deliberations.

LIST OF TOPICS FOR DISCUSSION UNDER ITEM 1 OF THE PROGRAMME OF WORK:
EXAMINATION AND IDENTIFICATION OF ISSUES RELEVANT TO THE PREVENTION
OF AN ARMS RACE IN OUTER SPACE

- I. The Prevention of an Arms Race in Outer Space as a matter of priority in the international agenda.
 1. Determination of the scope and objectives of multilateral work under the agenda item.
 2. The status of Outer Space:
 - as the common heritage of mankind which should be used exclusively for peaceful purposes;
 - as the province ("apanage") of mankind.
 3. The identification of the functions performed by space objects and of threats confronting them.
 4. The need for identification and elaboration of mutually-agreed legal terms:
 - possible elaboration of a glossary of relevant definitions
 - discussion or possible updating of Canadian working paper CD/716 on "Terminology Relevant to Arms Control and Outer Space"
 - additional sources: UNIDIR's report on Problems Related to Outer Space (1987)
 - other sources.
 5. Examination of sufficiency and adequacy of the existing legal regime.
 6. Approaches to reach a common understanding of what the existing legal norms do with regard to outer space activities:
 - recognition of limitations of the existing regime.
 7. Functioning of the existing legal instruments:
 - encouragement for wider participation and fuller compliance as generally acceptable means for strengthening of the regime.

II. Relationship between space activities, security and stability.

1. The absence at present of weapons in space.
 - acknowledgement of non deployment, at present, of weapons in outer space
 - existence of ground-based weapons aimed at space located targets
 - testing of air-based weapons aimed at space located targets
 - space-based weapons at research stage.
2. The relationship between the Prevention of an Arms Race in Outer Space and Arms Limitation and Disarmament Measures in other areas.
 - interrelation between measures related to Outer Space and other aspects of the disarmament and arms limitation domain.
3. Vulnerability and immunity of satellites, their role and use for purposes of reliable verification.
4. Different concepts relating to International Verification Systems:
 - comprehensive, combined
 - treaty specific
 - National technical means additioned by other methods suitable for multilateral agreements
 - analysis of technologies available.
5. Questions relating to compliance.
6. The need for information on how outer space is being used:
 - confidence building and predictability synthetic approach
7. National Space programmes of military significance.

III. New trends and dimensions of the Arms Race and its possible impact on the prevention of an Arms Race in Outer Space

1. Impact of science and technology in the prevention of an arms race in outer space.

IV. Importance and scope of the bilateral negotiations between the Union of Soviet Socialist Republics and the United States of America

1. Harmonization of work at the bilateral and multilateral levels.
2. Role of the Conference on Disarmament.

LIST OF TOPICS FOR DISCUSSION UNDER ITEM 2 OF THE PROGRAMME OF WORK:
EXISTING AGREEMENTS RELEVANT TO THE PREVENTION OF AN
ARMS RACE IN OUTER SPACE

- I. General consideration on the legal regime applicable to Outer Space relevant to the prevention of an Arms Race in this field
1. Peaceful Uses
2. Non-aggressive uses
3. Military uses.
4. Alternative approaches. The concept of Non Interference with Non Aggressive Activities of Space Objects.

II. Sources

1. Customary Law
2. The Charter
 - Preamble.
 - Art. 1 (1)
 - Art. 2 (2) and (4)
 - Art. 51

III. The Outer Space Treaty of 1967

1. Article IV
 - scope of the prohibition
 - possibility to ban activities or weapons not included in the prohibition set forth by Art. IV through the development of the concept of Non Interference with Non Aggressive Activities of Space Objects.
2. The question of the principle of exclusive use for peaceful purposes as reflected in the Treaty.
3. Perceived lacunae.
4. The question of the existence of a "double" regime applicable to Outer Space.

IV. Adequacy/Inadequacy-Sufficiency/Insufficiency

1. Limitations and loopholes.
2. consolidation, reinforcement, development:
 - by direct amendments
 - through an indirect approach (CBMS)
3. participation

V. The role of the Bilateral Agreements

1. The ABM treaty.

VI. The Strategic Defenses

1. Their impact on the problem under consideration:
 - protection against ballistic missile attacks.

LIST OF TOPICS FOR DISCUSSION UNDER ITEM 3 OF THE PROGRAMME OF WORK:
EXISTING PROPOSALS AND FUTURE INITIATIVES ON THE PREVENTION
OF AN ARMS RACE IN OUTER SPACE

I. The Outer Space Treaty

1. Existing restrictions and scope of the instrument.
2. Amendment proposals:
 - 2.A. Analysis of the consistency of Art. IV under the perspective of the regime applicable to Outer Space as distinct from the one confined to the Moon and Other Celestial Bodies. Consequential amendment.

- 2.B. Extension of the present prohibition to all kinds of weapon systems (CD/851).
- 2.C. Enlargement of the prohibition spelt out in art. IV to make it applicable to any kind of weapon systems (CD/939).

II. Anti-Satellite Weapon Systems (ASATs)

- 1. Banning of all ASAT weapons.
- 2. The question of banning dedicated ASAT weapons/specialized ASAT systems.
- 3. Banning of ASAT-mode testing of other weapon devices.
- 4. Gradual approach: 1. first use limitations; 2. rules of the road leading to a Comprehensive Ban on Satellite Intercept Capability.
- 5. Conclusion of an Additional Protocol for the purpose of prohibiting the development, production, storage and deployment of anti-satellite weapons not stationed in Outer Space.

III. Confidence-Building Measures

- 1. Synthetic Approach. Confidence Building and Predictability Measures in Outer Space.
- 2. Improvement of Data Bases.
- 3. The Registration Convention:
 - 1. strengthening of its regime
 - 1.A additional protocol
 - 1.B. refinement of information to be supplied as provided for in art. IV of the Convention
 - 1.C. possible additional criteria
 - pre-launch information
 - announcement of parameters
 - updating
 - other.
 - 2. Voluntary Data Exchanges
 - 2.A Declaration of Non Deployment of Weapons in Outer Space
 - 3. Rules of the Road Concept
 - 3.A restrictions on very low altitude overflights by manned and unmanned spacecraft
 - 3.B advanced notice of launch activities
 - 3.C specific rules for agreed and possible defended "keep out" zones
 - 3.D grant or restrictions of the right of inspections
 - 3.E limitations to high velocity fly-bys
 - 3.F limitations on trailing
 - 3.G consultation on ambiguous situations

4. Code of Conduct Concept:

4.A Codification of the principle of non-interference with
non-offensive space activities

4.B International Trajectory Centre - UNITRACE

5. Data Base

5.A Establishment of a Data Base on the launching of satellites and
the collection and classification of technical data

6. Combined Approaches

6.A The "Open Outer Space" concept

IV. The Role of the New Technologies

1. Non Nuclear Defences against strategic ballistic missiles

2. Phased program for co-operative transition to increasing reliance on
such defences

3. Predictability Measures.

V. Verification

1. General:

1.A interrelationship between verification in space and on earth's
surface related to space

1.B definitional questions (identification of space activities which
have inherent arms applications)

1.C practical difficulties including resources and funding

1.D the need to evolve from the almost exclusive use of National
Technical Means of Verification to other methods involving
multilateral agreements

2. Second Additional Protocol on Verification. Ref. CD/939.

3. Verification of Space activities. The question of confidentiality.
Disclosure of information.

4. Utilization of commercial space based remote sensing imagery.

5. Agency for Processing of Space Images.

6. Protection (immunity) of satellites serving as National Technical Means
of Verification.

7. Technologies available:

7.A microwave radar imaging

7.B satellite-borne sensors

7.C infra-red devices

7.D tagging of satellites

7.E other.

CONFERENCE ON DISARMAMENT

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Report of the Ad Hoc Committee on a Nuclear Test Ban

I. INTRODUCTION

1. At its 582nd plenary meeting on 14 February 1991, the Conference on Disarmament adopted the following decision on the re-establishment of an ad hoc committee under item 1 of its agenda entitled "Nuclear Test Ban" (CD/1060):

"In the exercise of its responsibilities as the multilateral disarmament negotiating forum in accordance with paragraph 120 of the Final Document, the Conference on Disarmament decides to re-establish an Ad Hoc Committee under item 1 of its agenda entitled "Nuclear Test Ban".

The Conference requests the Ad Hoc Committee to initiate, as a first step towards achieving a nuclear test ban treaty, substantive work on specific and interrelated test ban issues, including structure and scope as well as verification and compliance.

Pursuant to its mandate, the Ad Hoc Committee will take into account all existing proposals and future initiatives. In addition, it will draw on the knowledge and experience that have been accumulated over the years in the consideration of a comprehensive test ban in the successive multilateral negotiating bodies and the trilateral negotiations.

The Conference also requests the Ad Hoc Committee to examine the institutional and administrative arrangements necessary for establishing, testing and operating an international seismic monitoring network as part of an effective verification system of a nuclear test ban treaty. The Ad Hoc Committee will also take into account the work of the Ad Hoc Group of Scientific Experts to Consider International Co-operative Measures to Detect and Identify Seismic Events.

The Ad Hoc Committee will report to the Conference on Disarmament on the progress of its work before the conclusion of the 1991 session."

II. ORGANIZATION OF WORK AND DOCUMENTATION

2. At that same plenary meeting on 14 February 1991, the Conference on Disarmament appointed Ambassador I.S. Chadha of India as Chairman of the Ad Hoc Committee. Mr. Michael Cassandra of the United Nations Department of Disarmament Affairs served as Secretary.

3. A delegation of a nuclear weapon State did not participate in the work of the Ad Hoc Committee. A number of delegations regretted this absence and expressed the hope that it would reconsider its position at an early date.

4. The Ad Hoc Committee held 17 meetings from 21 February to 22 August 1991. In addition, the Chairman conducted a number of informal consultations with delegations.

5. At their request, the representatives of the following 24 States not Members of the Conference were invited to participate in the work of the Ad Hoc Committee: Angola, Austria, Cameroon, Chile, Colombia, Costa Rica, Denmark, Finland, Greece, Holy See, Ireland, Jordan, Malaysia, New Zealand, Norway, Oman, Spain, Switzerland, Syrian Arab Republic, Turkey, United Arab Emirates, Uruguay, Vietnam and Zimbabwe.

6. The following official documents dealing with a nuclear test ban were presented to the Conference:

- CD/1054, dated 4 February 1991, submitted by Indonesia, Mexico, Peru, Venezuela, Yugoslavia and Sri Lanka entitled "Letter dated 4 February 1991 from the Representatives of Indonesia, Mexico, Peru, Venezuela, Yugoslavia and Sri Lanka addressed to the President of the Conference on Disarmament transmitting Draft Protocol II of Amendment to the Treaty Banning Nuclear Weapon Tests in the Atmosphere, in Outer Space and Under Water."
- CD/1060, dated 14 February 1991, entitled "Mandate for an ad hoc committee under agenda item 1."
- CD/1066, dated 8 March 1991, submitted by the delegation of the United States, entitled "Letter dated 28 February 1991 from the Representative of the United States of America addressed to the President of the Conference on Disarmament transmitting the text of the 1974 Treaty between the United States of America and the Union of Soviet Socialist Republics on the Limitation of Underground Nuclear Weapon Tests, together with its Protocol."
- CD/1067, dated 8 March 1991, submitted by the delegation of the United States, entitled "Letter dated 28 February 1991 from the Representative of the United States of America addressed to the President of the Conference on Disarmament transmitting the text of the 1976 Treaty between the United States of America and the Union of Soviet Socialist Republics on Underground Nuclear Explosions for Peaceful Purposes, together with its Protocol."
- CD/1068, dated 8 March 1991, submitted by the delegation of the Union of the Soviet Socialist Republics, entitled "Letter dated 28 February 1991 from the Representative of the Union of Soviet Socialist Republics addressed to the President of the Conference on Disarmament transmitting the text of the 1974 Treaty between the Union of Soviet Socialist Republics and the United States of America on the Limitation of Underground Nuclear Weapon Tests, together with the Protocol thereto."

- CD/1069, dated 8 March 1991, submitted by the delegation of the Union of the Soviet Socialist Republics, entitled "Letter dated 28 February 1991 from the Representative of the Union of Soviet Socialist Republics addressed to the President of the Conference on Disarmament transmitting the text of the 1976 Treaty between the Union of Soviet Socialist Republics and the United States of America on Underground Nuclear Explosions for Peaceful Purposes, together with the Protocol thereto."
- CD/1081, (also issued as CD/NTB/WP.13), dated 11 June 1991, submitted by the delegations of Australia and New Zealand, entitled "Verification of a Comprehensive Test Ban."
- CD/1089, (also issued as CD/NTB/WP.14), dated 31 July 1991, submitted by the delegation of Sweden, entitled "Letter dated 9 July 1991 from the Head of the Swedish Delegation addressed to the Secretary-General of the Conference on Disarmament transmitting the text of a Draft Comprehensive Test-Ban Treaty and its annexed Protocols."
- CD/1094, dated 7 August 1991, submitted by the delegation of Canada, entitled "Letter dated 2 August 1991 from the Permanent Representative of Canada addressed to the Secretary-General of the Conference on Disarmament transmitting the Arms Control Verification Occasional Paper No. 8, entitled 'Nuclear Test Ban Verification: Recent Canadian Research in Forensic Seismology'."

In addition, the following working papers were presented to the Ad Hoc Committee:

- CD/NTB/WP.13 (also issued as CD/1081).
- CD/NTB/WP.14 (also issued as CD/1089).

The following conference room papers were before the Ad Hoc Committee:

- CD/NTB/CRP.9, dated 25 February 1991, entitled "Indicative Schedule of Meetings".
- CD/NTB/CRP.10, dated 12 March 1991, submitted by the delegation of Mexico, entitled "Working paper on the link between the provisions of the NPT regarding nuclear disarmament measures and those regarding the review conferences and the limited duration of the Treaty."
- CD/NTB/CRP.11/Rev.1, dated 16 May 1991, submitted by the Chair, entitled "Chairman's Summary of General Debate."
- CD/NTB/CRP.12, dated 31 May 1991, prepared by the Secretariat, entitled "Composite Paper containing elements of Multilateral Treaties relating to Nuclear Explosions for Peaceful Purposes (PNES)."
- CD/NTB/CRP.13, dated 13 June 1991, submitted by the Chair, entitled "Chairman's Summary on Structure and Scope."
- CD/NTB/CRP.14/Rev.1, dated 6 August 1991, submitted by the Chair, entitled "Chairman's Summary on Verification and Compliance."
- CD/NTB/CRP.15/Rev.2, dated 20 August 1991, entitled "Draft Report of the Ad Hoc Committee on a Nuclear Test Ban."

Furthermore, upon the request of the Ad Hoc Committee, the Secretariat compiled a paper containing the three Terms of reference of the Ad Hoc Group of Scientific Experts to Consider International Co-operative Measures to Detect and Identify Seismic Events (CD/NTB/INFORMAL of 11 June 1991).

III. SUBSTANTIVE WORK DURING THE 1991 SESSION

7. At its first meeting on 21 February 1991, the Ad Hoc Committee decided to organize its work based on the items contained in its mandate. The matrix prepared by the Chairman of the Ad Hoc Committee in 1990 served as an unofficial guide to discussions throughout the session. A same number of meetings were devoted to the following three items: general debate; structure and scope; and verification and compliance (see Indicative Schedule of Meetings, CD/NTB/CRP.9). Furthermore, in accordance with its mandate, to also take into account the work of the Ad Hoc Group of Scientific Experts to Consider International Co-operative Measures to Detect and Identify Seismic Events, the Ad Hoc Committee invited the Ad Hoc Group to a meeting on 1 August 1991.

8. The report is structured along the lines agreed by the Ad Hoc Committee in its division of labour and views of delegations are reflected under the three main items considered. In order to assist the Ad Hoc Committee, and strictly on his own behalf, the Chairman presented summaries of the debates on the three main topics (see CD/NTB/CRP.11/Rev.1, CRP.13 and CRP.14/Rev.1). These summaries were neither endorsed nor discussed by the Ad Hoc Committee.

9. The work of the Ad Hoc Committee took place in the light of the many views that had been expressed in plenary meetings of the Conference throughout the 1991 session as contained in its official records.

General Debate

10. Many views were expressed on general issues related to a nuclear test ban both during the four meetings the Ad Hoc Committee devoted to general debate and throughout the remaining meetings. The comments made during the general debate on structure and scope and verification and compliance are summarized under their respective sections below. The exchange of views underlined the importance all delegations attached to multilateral consideration of a nuclear test ban. It was also welcomed as useful in laying the groundwork for the further consideration of the other two clusters of items that were taken up, namely, structure and scope; and verification and compliance.

11. The early re-establishment of the Ad Hoc Committee in 1991 was welcomed by all delegations as it gave ample opportunity for delegations to address the many political and technical issues of relevance to a nuclear test ban.

12. The Group of 21 continued to stress the need for the Ad Hoc Committee to be provided with a negotiating mandate. One delegation of the same group stated that it had joined the consensus for the re-establishment of the Ad Hoc Committee with a non-negotiating mandate only for 1991 and that if the Ad Hoc Committee was not provided with a negotiating mandate next year, it would be pointless to carry on a sterile exercise. Delegations of the Western group maintained that the current mandate of the Ad Hoc Committee allowed for genuine progress on the issues of a nuclear test ban.

13. There continued to be a general acceptance of the final goal of a nuclear test ban. However, differences remained on its timing and modalities. Many delegations of the Group of 21 stressed again that for them a nuclear test ban remained an absolute priority to halt the quantitative and especially the qualitative arms race, since they believed it would prevent the development of a new generation of nuclear weapons. For delegations of the Western group, a nuclear test ban remained a long-term goal and had to be seen in the context of the wider disarmament process. They pointed out that even without a nuclear test ban, at least two nuclear weapon States had begun a process of quantitative nuclear disarmament, viz., the INF Treaty and the cuts to be enacted under the START Treaty. It was clear to the delegations of the Group of 21 that what they considered a justified fear of the devastating consequences of the use of nuclear weapons had encouraged many States to advocate a halt to nuclear weapon tests. They pointed out that the achievement of a nuclear test ban was only a partial measure in the overall goal of complete nuclear disarmament, and its importance could not be belittled in this context. They added, however, their belief that cuts envisaged under START could actually lead to the modernisation of existing nuclear arsenals.

14. Many references were made to the recent political changes that have taken place in the world. Many delegations stated that the improved international climate held opportunities in the field of nuclear disarmament which should not be squandered. The INF Treaty and the recent signature of the START Treaty were encouraging signs of deep changes in this field. In the area of nuclear testing, many delegations welcomed the ratification of the USSR/United States Threshold Test Ban Treaty (TTBT) and the Peaceful Nuclear Explosions Treaty (PNET). Some delegations called upon the USSR and United States to continue the phased process of negotiations towards reducing the yield and number of their nuclear tests. The call to the two bilateral negotiators to continue the practice of providing the Conference on Disarmament with information on the status of their plans for future negotiations was reiterated.

15. Delegations of the Group of 21 recalled the numerous resolutions of the General Assembly adopted by overwhelming majorities over many years calling for an immediate halt to nuclear testing. They also recalled the many initiatives over the years on the subject, including the Six-Nation Initiative of 1986, which presented, in their view, a concrete offer for the adequate verification of a nuclear test ban. Many delegations of the Group of 21 stated that the convening in 1991, upon the request of one-third of the States Parties, of the first substantive session of the Amendment Conference of the Partial Test Ban Treaty also was an expression of the urgency attached to the achievement of a nuclear test ban by a vast majority of the international community. Some delegations of the Group of 21 suggested that the lack of agreement on a final declaration at the 1990 Fourth Review Conference of the Non-Proliferation Treaty was also a reflection of the concern of the majority of the States Party to that Treaty over the lack of progress towards the achievement of a nuclear test ban.

16. The security implications of nuclear testing were discussed, with particular emphasis on its relationship to nuclear deterrence. The NATO Declaration made in London in 1990 (see CD/1013) to the effect that the Alliance would reduce its reliance on nuclear weapons was recalled by those members of the Western group concerned. They stated that the NATO Alliance was reviewing its policy with respect to nuclear weapons, but that, for the

foreseeable future, NATO security would depend in part on such weapons. For that reason, NATO States continued to see a requirement to conduct tests to keep nuclear weapons safe, secure, reliable and up-to-date. It was also felt that prospects to reduce nuclear weapons to a minimum were good and that a concomitant reduction of nuclear tests to a minimum would follow. In this context, support for the step-by-step approach for the realization of a comprehensive test ban was again reiterated by delegations of the Western group of States.

17. In this context, most Western delegations committed themselves to the step-by-step approach, as a realistic approach for the achievement of a comprehensive nuclear test ban. They considered that the ratification of the TTBT and PNET together with the new verification Protocols represented an important step towards this goal and a partial fulfilment of this commitment. In their view, the step-by-step approach should reduce the quantity and yield of nuclear testing still further whenever political and technical conditions so allowed. They felt that it should be recognized that the Western nuclear powers already kept their nuclear test programmes to the minimum necessary to meet national security requirements and that, as a consequence, the overall number of nuclear explosions between 1983 and 1990 had already decreased to one-third of the initial level.

18. A nuclear weapon State belonging to the East European group expressed a continued commitment to the early achievement of a comprehensive test ban as not only a measure to curb the nuclear arms race, but an important means of promoting non-proliferation of nuclear weapons as well. Based on this assessment of the importance of the role of a nuclear test ban in world affairs, it was prepared to use all possible ways and means in order to reach its early resolution - be it through bilateral negotiations or multilateral efforts, through widening the scope of the 1963 Moscow Treaty or through a joint declaration together with the major nuclear weapon State belonging to the Western group on a nuclear tests moratorium. It held the view that a step-by-step approach to the achievement of a comprehensive ban was justifiable. It pointed to that approach in its bilateral negotiations on nuclear testing with the major nuclear weapon State belonging to the Western group and stressed that the first goal of those negotiations had been reached with the ratification of the Threshold Test Ban Treaty of 1974 and the Peaceful Nuclear Explosions Treaty of 1976 and their attached Protocols. It underlined support for a continuation of negotiations to consider further limitations on the quantity and yield of nuclear tests. It restated its conviction that a final resolution of the problem of stopping nuclear tests required focusing the efforts of the relevant multilateral bodies as well. In its view, bilateral and multilateral efforts may and should complement each other. It was of the opinion that such a representative forum as the Conference on Disarmament would also make its tangible contribution to the solution of this problem through its Ad Hoc Committee. It also considered that Draft Protocol II of Amendment to the PTBT and the submission of the revised Draft Comprehensive Test Ban Treaty by one delegation belonging to the Group of 21 as important steps towards a nuclear test ban.

19. A nuclear weapon State member of the Western Group reaffirmed that nuclear weapons continued to play a critical role in its national security strategy, as well as in the national security strategies of its allies. So long as this is the case, it stated that it must be free to conduct nuclear tests to ensure the safety and credibility of its forces. While a CTB remained a long-term objective, it believed that such a ban must be viewed in the context of a time when States do not need to depend on nuclear deterrence

to ensure international security and stability. It held that when broad, deep, and effectively verifiable arms reductions, substantially improved verification capabilities, expanded confidence-building measures, and greater balance in conventional forces was achieved, a CTBT could be attainable. This State believed that the best way to address the threat posed by nuclear weapons and to further the aims of nuclear arms control was through the reduction of nuclear weapons. It maintained that the recent signing of the START Treaty represented a major achievement in securing a more stable, predictable balance at lower levels of nuclear force. It noted that the agreement included a major reduction in the most destabilizing and dangerous weapons, land-based ballistic missiles and their warheads, and placed restrictions on specific types of strategic weapons and that a further important aspect of the START Treaty was its contribution to increasing predictability and transparency. It believed that unlike the START Treaty, a CTB would not result in any reduction in existing arsenals, nor deal with the threat posed by nuclear weapons. It pointed out that contrary to the beliefs of some, even the most effective seismic monitoring system was only one element of effective verification. It reaffirmed that the question should be dealt with on the basis of a step-by-step approach. It welcomed the re-establishment of the Ad Hoc Committee with a non-negotiating mandate, and stressed that it would contribute fully as well as share the results of its research in relevant technologies.

20. Another nuclear weapon State belonging to the Western group stated that it undertook nuclear tests because, with its NATO Allies, it believed that war was best prevented by keeping a sensible mix of conventional and nuclear weapons which would present any possible aggressor with risks out of proportion to any possible gain. Its nuclear forces represented the minimum required for preventing war; to be a sure deterrent, they must be kept effective and up-to-date and for the present that required testing. It therefore supported a comprehensive ban on all nuclear tests only as a long-term goal.

21. Yet another nuclear weapon State not belonging to any group restated that it understood the urgent desire of the Third World countries and the non-nuclear-weapon States for a nuclear test ban at an early date. It reiterated the importance that it attached to the issue of a nuclear test ban in the context of its continued stand in favour of the complete prohibition and thorough destruction of all nuclear weapons. It again repeated that in order to stop the nuclear arms race and achieve nuclear disarmament, the two States possessing the largest nuclear arsenals should take the lead in halting the development, production and deployment of all nuclear weapons and drastically reducing their nuclear arsenals. It welcomed the constructive discussions in the Ad Hoc Committee, in which it would continue to participate and take an active part.

22. The Group of 21 delegations expressed the view that since the Cold War had ended and in the light of some of the political and security changes underway in Europe, the reasons for reliance by some States on nuclear deterrence seemed no longer valid. The Group maintained the position that nuclear deterrence cannot ensure international security and stability, particularly in the context of the new positive international climate. A nuclear weapon State belonging to the Western Group said that the significance of nuclear weapons in its nuclear deterrence doctrine and that of its allies had evolved over the years in response to changing requirements. It stated that the collective thinking in the Atlantic Alliance about nuclear weapons had undergone a shift in response to the dramatic political and military

changes in Europe over the past two years. It pointed to the most recent evolution in their approach, the new strategy recorded in the London communiqué of 5-6 July 1990 (see CD/1013), in which nuclear forces would be truly weapons of last resort. It added that major developments cannot be predicted in today's world which is characterized by great uncertainty nor could future security requirements be predicted; political, economic, and social changes had unleashed forces whose effects were not foreseeable.

23. Delegations of the Group of 21 continued to stress that the central purpose of nuclear testing was the modernization of nuclear weapons. In particular, they felt that a comprehensive nuclear test ban would help to halt the next round of the vertical nuclear arms race, namely, the development of "third" generation weapons or "directed energy" weapons. They felt that, while horizontal proliferation was a hypothetical possibility, there were well-documented facts regarding vertical proliferation of nuclear warheads and infrastructures of the nuclear weapon States. They believed also that the spatial spread of arsenals and infrastructures to the high seas and the territories of countries far removed and the extension of at least the infrastructure to outer space had totally nuclearised the globe. They felt that a general acceptance had developed that a nuclear test ban would stem proliferation both vertically and horizontally and serve to fulfil genuine and universal non-proliferation concerns.

24. A nuclear weapon State belonging to the Western group held the view that a nuclear test ban would not be a guarantee against horizontal nuclear non-proliferation as it was possible that a first generation nuclear device could be developed without testing. Furthermore, it also held the view that, even without a halt to testing, the numbers of nuclear weapons were being reduced. It also questioned the statement that a halt to nuclear testing would stem the development of a "third" generation of nuclear weapons since, in its view, such a development would represent a quantum leap into new technology. It stated that nuclear non-proliferation was best addressed through regional cooperation in peaceful nuclear programmes as well as through effective international controls over nuclear weapons technology and materials.

25. Some delegations of the Group of 21, States Party to the NPT, reiterated the importance they attached to the strengthening of that Treaty. Comments were made on the results of the Fourth Review Conference of the Treaty held in 1990. They reiterated again the historical link between progress on nuclear disarmament and towards a nuclear test ban and the future extension of the Non-Proliferation Treaty beyond 1995, and the commitments made by nuclear weapon States were recalled in detail by delegations of the Group of 21. As a contribution to the discussion, a background paper on the historical link between nuclear disarmament measures and the extension of the Treaty was presented to the Ad Hoc Committee (see CD/NTB/CRP.10) by one delegation of the Group of 21. Some delegations of the Western group of States felt that the frustration experienced by some Parties to the Treaty over the question of a nuclear test ban, which was reflected in the inability of the Conference to adopt a final declaration, should be redressed by dialogue on the subject and not by confrontation. Some delegations of the Western Group of States stated that no such commitments as mentioned by the Group of 21 had been made and that there should be no link between a nuclear test ban and the extension of the Non-Proliferation Treaty.

26. The nuclear weapon States were asked whether they could provide a breakdown of data, based on published results, on their nuclear testing which would indicate separately the number of tests conducted/needed for development of weapons or for stockpile reliability. In response, they explained that a breakdown of data on nuclear testing could not be easily categorized.

27. The proposal in the Six-Nation Initiative for a moratorium on nuclear weapon testing pending the conclusion of a comprehensive test ban treaty was recalled by delegations of the Group of 21.

28. Views were expressed on the Amendment Conference to the 1963 Partial Test Ban Treaty which took place in January this year. It was felt by the Group of 21 delegations Party to the Partial Test Ban Treaty that developments from the Conference should be taken into account and, in particular, there should be a discussion on the Draft Protocol II on verification of the proposed amendment to the PTBT, presented to that Conference and subsequently to the Conference on Disarmament by Indonesia, Mexico, Peru, Sri Lanka, Venezuela and Yugoslavia in document CD/1054. Some comments made on the Draft Protocol are summarized under the Verification and Compliance section. It was stated by the Group of 21 delegations Party to the PTBT that progress in the Ad Hoc Committee would be a test of those delegations which had participated in the Amendment Conference and which had pledged their readiness to pursue a debate on a comprehensive test ban through the Conference on Disarmament.

29. Discussions also focused on the possible negative effects of nuclear testing on health and the environment. Many delegations, members and non-members of the Conference, expressed the view that recent reports pointed to concerns over environmental and health effects in regions where nuclear tests were carried out. In that connection, several references were made to the report of the United Nations Secretary General containing a comprehensive update of the Comprehensive Study on Nuclear Weapons (A/45/373) and other reports and articles. One delegation of a nuclear weapon State belonging to the Western group stated that the entry into force of the Partial Test Ban Treaty, and the adherence to its terms by two other nuclear weapon States to conduct underground tests, combined with the sophistication of technology for containing underground tests, had minimised concern over negative environmental effects. It referred to the 1989 Report of the United States Office of Technology Assessment, which explained that all its testing is performed under rigidly controlled conditions to minimise the potential impact of the tests on the environment and on public safety. The Group of 21 expressed the view that the goal of the Committee was not to seek clean nuclear underground tests and, therefore, environmental and health concerns related to underground testing should not take precedence over the political goal of a nuclear test ban treaty since the major objective of such a treaty was to prevent the production of a new generation of nuclear weapons.

30. One delegation of the Group of 21 put forward a draft Comprehensive Test-Ban Treaty (see CD/1089 and CD/NTB/WP.14), which was a revised and considerably extended version of a draft Treaty submitted by the same delegation in 1983 (CD/381). This delegation stated in the course of introducing its proposal that the new draft was put forward against a background of recent improvements in the international climate. It stressed that the General Assembly of the United Nations had year after year underscored the urgent need for a comprehensive nuclear test ban treaty. It maintained that an end to nuclear testing would be a clear manifestation of a genuine will to pursue nuclear disarmament and would be a way of curbing horizontal and vertical proliferation. It felt that there was also widespread concern about the collateral effects of nuclear testing. It stated that the draft submitted was intended as a basis for consideration in the Ad Hoc Committee and in due course as an input to negotiations. It underlined that the new draft had taken into account rapid scientific and technological developments. It pointed to the major changes had been

undertaken with regard to the Protocols, dealing with a verification system and organizational matters. It believed that technical achievements in the field of verification were such that effective international verification of a CTBT was possible. It also considered that given a political preparedness to conclude a CTBT, the effectiveness of the verification régime was largely a question of the amount of resources allocated for the purpose. It pointed to the measures contained in the draft Treaty, such as seismic monitoring, surveillance of airborne radioactivity, satellite observations and on-site inspection, aimed at establishing an effective verification system. It also pointed to the operational manuals the draft Treaty proposes to be established to guide the operation of the various components of the verification system. It also described the proposed Organization of the draft Treaty, which was to oversee the overall functioning of the Treaty and its verification arrangements: it was proposed to consist of the Conference of the States Parties as the principal organ; the Executive Council as the executive organ of the Conference to promote the practical implementation and operation of the Treaty and its verification arrangements; and a Technical Secretariat to conduct the day-to-day operation of the Treaty. The Ad Hoc Committee offered preliminary comments on this document. A number of delegations welcomed the proposal as an important contribution to the future work of the Ad Hoc Committee. One Western nuclear weapon State questioned whether the scope and the definition of a nuclear weapon State contained in the draft treaty effectively addressed the concerns raised in the Ad Hoc Committee. Other delegations stated that if a definition were to be attempted there would always be a possibility of a certain category being excluded which would be detrimental to the treaty in the future. As to the issue of a definition of a nuclear weapon State, those delegations also stated that another relevant Treaty already contained such a definition, which was why it was retained in the draft Treaty presented.

Structure and Scope

31. For delegations of the Group of 21, "Structure" meant dealing with the following elements, inter alia:

- Preamble
- Scope
- Verification
- Compliance
- Organization.

Furthermore, they felt that these elements were interrelated and should be dealt with as such. Provisions of existing multilateral and bilateral instruments could be taken into account for this purpose. It was mentioned that the structure could consist of three basic elements, namely, the scope of the instrument as such, the link between States Parties to the instrument and consistency with the verification system for the treaty, matters relating to the duration of the instrument as well as the question of the depository. The possibility of up-dating the structures of the treaty in tune with developing needs was advanced.

32. Delegations belonging to the Western group stated that the structure of a future nuclear test ban treaty was part and parcel of negotiations on a nuclear test ban. Hence, they reiterated that it was inappropriate to discuss this question at the stage which the Ad Hoc Committee had reached in its discussions. However, they underscored that the Ad Hoc Committee could consider the various elements that would form a part of eventual negotiations on the subject.

33. As to the scope of a future nuclear test ban treaty, some delegations of the Group of 21 stated that it was clearly spelt out in the Preamble of the Partial Test Ban Treaty of 1963 and should contain the following three elements:

- i) it should cover all States including the five existing nuclear weapon States;
- ii) it should extend the prohibition on testing of nuclear weapons to the underground environment;
- iii) it should do so for all time.

Reference was made to the agreement contained in the Trilateral Negotiators Report of 1980 (CD/130 of 30 July 1980) with respect to the scope of a future nuclear test ban treaty. Some delegations belonging to the Group of 21 stated that during the earlier consideration of a comprehensive test ban treaty, peaceful nuclear explosions had always been assigned a separate role. Also, the original intention of the PTBT clearly was to maintain a dividing line between nuclear explosions for military purposes, which were to be prohibited entirely and nuclear explosions for peaceful purposes, to be allowed under certain conditions. All the existing international agreements which referred to nuclear tests contained separate provisions for peaceful nuclear explosions. These delegations expressed the view that the scope of a future treaty should be consistent with what the Preamble of the PTBT seeks to achieve and to ensure that the majority of nations were not denied the full benefits of technological advancement in the nuclear field, while a handful of States were left free to do so. The interests of the non-nuclear weapon States had to be taken into account on the basis of complete equality with the interests of the nuclear weapon States. In this context the provisions contained in the Treaty of Tlatelolco, and the Threshold Test Ban Treaty and Peaceful Nuclear Explosions Treaty, suggesting differentiation between nuclear explosions for military purposes and peaceful nuclear explosions, were specifically recalled by some delegations of the Group of 21. Another delegation of this Group stated that with regard to the Structure and Scope, as to what a CTBT could be, in principle, it should be total, but it should not close the door definitively to possible peaceful use if this is seen to be necessary in proper environmental and security conditions that would not harm the position of any State.

34. Delegations belonging to the Western Group of States underlined that the technology for a peaceful nuclear explosion was indistinguishable from an explosion for military purposes. They discussed at length the early optimism which existed on the potential uses of nuclear explosions for peaceful purposes and described the large number of explosions that were conducted to try and demonstrate their feasibility. The conclusions reached by them were that peaceful nuclear explosions were not economically nor environmentally feasible. They pointed out that peaceful nuclear explosives were sophisticated and that the physics, technical know-how, and nuclear materials required were quite similar to those required for military nuclear explosives, in that size, compactness, and rugged designs were stated goals for both peaceful and military explosives. They brought to the Ad Hoc Committee's attention the conclusions reached by many experts including those from the United Nations Comprehensive Study on Nuclear Weapons (A/45/373) which concluded that five major arms limitation and disarmament treaties attest to the similarity of nuclear explosive devices for military and for peaceful purposes.

35. It was suggested by some delegations belonging to the Western group that the Ad Hoc Committee might need to elaborate the definition of a nuclear explosion, with the advice of technical experts. Several delegations belonging to the Group of 21, however, pointed to the complexities involved in the possible development of an agreed definition of nuclear explosions. They stated that if a definition was attempted, there would always be the possibility of a certain category being omitted, which could cause difficulty for the treaty régime at a later date, and that it was not necessary to do so. Some delegations of the Western Group of States stated that a definition of a nuclear explosion was critical to the discussion on the nuclear test ban issue. The questions of computer simulations, laboratory tests and contained nuclear explosions were also discussed. In this respect, a delegation of the Group of 21 stressed the importance of peaceful nuclear explosions and their technical and economic value and the need to keep open in any multilateral agreement the utilization of computer simulations, laboratory tests and contained nuclear explosions.

36. It was suggested by some delegations belonging to the Group of 21 as well as to the Western group that the question of agreeing on the lowest verifiable limit, i.e. threshold of nuclear explosions, be taken up. The view was expressed that this issue was directly linked to the consideration of verification of a nuclear test ban. It was suggested in this context by some delegations of the Group of 21 that even a one kiloton threshold would seriously impair the development of a third generation of nuclear weapons. One delegation presented examples of what could be achieved in the laboratories below the one kiloton threshold. It stated that the Ad Hoc Committee had also to take into account other research programmes like the Inertial Confinement Fusion Programme and the sensitivity of that technology. In this context, the research relating to the x-ray laser, nuclear kinetic energy weapons, optical laser, microwave beams as well as particle beams was referred to. Some delegations of the Group of 21 suggested that technical advice could be obtained from the Ad Hoc Group of Scientific Experts on the verifiability of certain thresholds for a nuclear test ban treaty.

Verification and Compliance

37. Divergent views were expressed by delegations as to whether all the technical pre-requisites were available today to effectively verify a total test ban. While acknowledging the technical aspects of the issue, many delegations of the Group of 21 believed that the resolution of the issue of verification was rather political in nature. They noted that the ongoing work of the Ad Hoc Group of Scientific Experts has provided concrete evidence that a nuclear test ban was verifiable using technology currently available. Other delegations stressed that there are many detailed, technical issues that still needed to be resolved for an effective global monitoring of a nuclear test ban.

38. A nuclear weapon State of the Western group suggested that the Ad Hoc Committee consider the means that currently exist to verify the 1974 Threshold Test Ban Treaty and the 1976 Peaceful Nuclear Explosions Treaty compared with what would be required to verify effectively a comprehensive nuclear test ban treaty. It underlined that verification Protocols to the TTBT and PNET took almost three years of intensive bilateral negotiations. It recommended that delegations examine these lengthy and complex technical Protocols which were distributed as official documents to the Conference as CD/1066 and CD/1067, respectively. It stated that the Protocols were unprecedented in nature and

complexity, and noted that the provisions in these Protocols still had to be implemented. It stressed that the task of verifying the TTBT would be minor compared to verification of a CTBT. It stated that verification of the TTBT required an extensive on-site presence, deployment of a highly sophisticated and complex array of instrumentation, and detailed knowledge of the test location and its geological environment. It underscored that verification of a CTBT, on the other hand, would involve global rather than local monitoring and analysis of any and all measurable explosions or disturbances. It added that this would be followed by the complex task of screening to distinguish nuclear test explosions from earthquakes, chemical explosions, and other phenomena. Based on this State's analysis, the means did not currently exist to verify a CTBT adequately. It stated that such a programme of verification would dwarf the current TTBT régime in terms of scale and complexity.

39. The starting point for the debate was the question of the scope of an eventual agreement, specifically, the levels of the yield of explosions that could be agreed in order to create political confidence that a ban was being complied with. Delegations of the Western group of States held that this aspect depended upon politico/military decisions of States with respect to their national security concerns. Differing views continued to be expressed as to what should be the yields of explosions that would allow for not only their detection but also for their identification as nuclear explosions. Some delegations of the Western group expressed the view that there still existed possible evasion techniques, such as, cavity decoupling and the masking of explosions during earthquakes, the verification methods for which could not yet give full confidence. The Group of 21 delegations maintained that such techniques tended toward the impractical, that these types of explosions would eventually be detectable by non-seismic means and that it was also impractical to work for a 100% foolproof verification system. One delegation belonging to the Western group and one delegation non-member of the Conference, in their working paper (CD/NTB/WP.13), mentioned that the technology to attempt such evasions was unlikely to be available outside the existing nuclear weapon States, and the risk of detection would be extremely high and would increase with each test. These two delegations maintained that attempts to evade a nuclear test ban would be confined to a level at which the military advantages to be gained from clandestine explosions would be minimal and the chances of escaping detection would be extremely low.

40. Some delegations of the Western group suggested a step-by-step approach which would gradually reduce the threshold levels of explosions at successively verifiable levels, as a way of ensuring confidence in a global test ban. A number of States of the Group of 21 expressed the view that even a one kiloton ceiling would seriously impede the development of a new generation of nuclear weapons. This would curtail, in their view, the qualitative 'improvements' in nuclear weapons and render further refinements in the size, yield or yield to weight ratio of nuclear weapons nearly impossible. They also maintained that it would reduce the likelihood that potential 'first' strike weapons would be built. Also raised was the issue of laboratory or contained tests at very low yields and whether new verification techniques would need to be developed in order to deal with them. Some delegations of the Group of 21 stated that while laboratory research and development of new weapons designs might continue, the inability to test the performance of new designs would inhibit States from accepting such weapons into their arsenals. They added that gradually the verification régime of a nuclear test ban treaty could be made more comprehensive and foolproof. A nuclear weapon State of the Western group asserted that a one

kiloton explosion could still provide valuable nuclear weapons development information. The same State added that, even if a one kiloton threshold were ever to be achieved, this would not be effective in precluding the development of nuclear weapons.

41. Some issues involved with nuclear testing in other environments besides underground were raised by some delegations of the Western group. Comments were made on the feasibility of verification of nuclear tests if they were conducted in outer space, in the atmosphere or under water. A suggestion was made by one delegation of the Western group that feasibility studies might be conducted in this regard. The importance of seismic means of verification was stressed once again and it was pointed out that a strong capability in the seismic verification field was already available and could be improved further. Views were aired by delegations of all groups that non-seismic means of verification would also be required in order to adequately monitor an eventual nuclear test ban. Methods such as radio-active surveillance of the atmosphere, hydro-acoustic monitoring, satellite photo-imaging and on-site inspections were cited. It was stated that an eventual combination of these means could provide a reliable verification system.

42. It was felt by many delegations that the Ad Hoc Committee should take up the issue of the future activities of the Ad Hoc Group of Scientific Experts To Consider International Cooperative Measures to Detect and Identify Seismic Events after the Ad Hoc Group presents a report on its second major technical test (GSETT-2) during the 1992 session. Differing views were expressed on the mandate of the Ad Hoc Group and on the future directions the Ad Hoc Group could take. It was recalled that any changes in the mandate of the Ad Hoc Group were in the purview of the Conference on Disarmament. Many views were aired about the possible future tasks of the Ad Hoc Group within the existing or a revised mandate: inter alia; the design of a system with one International Data Centre (IDC) and not four; the preparation of preliminary operational manuals; further research on use of waveforms at IDCS; the establishment of in-country stations; the estimated capabilities of a global seismic monitoring system. Other techniques were also mentioned: the monitoring of atmospheric radioactive nucleides; on-site inspections, on-site monitoring of large non-nuclear explosions and satellite images interpretation. Other views were aired that the Ad Hoc Group was not the group to make recommendations on future work in areas other than seismic and that further discussion was needed within the Ad Hoc Committee on how non-seismic technical verification issues should be handled. It was suggested by some delegations that the Ad Hoc Committee worked in parallel with the Ad Hoc Group and recommendations for the future work of the Ad Hoc Group needed to come both from the Ad Hoc Group itself and from the Ad Hoc Committee, as two distinct organs of the Conference, working towards the same goal.

43. Some views were expressed concerning the institutional arrangements that would need to be made in connection with a verification régime. Some delegations of the Western group were of the view that a discussion of institutional arrangements was still premature in light of the need to agree on the scope of a nuclear test ban agreement and the related verification requirements. Some specific proposals were put forward and were commented upon. Some delegations of the Group of 21 felt that national data centres, already elaborated upon by the Ad Hoc Group of Seismic Experts, could perform a multitude of technical functions and procedures, and could therefore serve as a basis for a national body which would also handle political aspects such as complaints and on-site verification.

44. Some comments were made on the Draft Protocol II of Amendment to the Partial Test Ban Treaty. They concerned: terminology and definitions; the functions and structure of the Secretariat; an operational governing body; more detailed non-seismic verification; aspects of the inspection procedures; the establishment of different monitoring thresholds for different Parties to the agreement; cost-effectiveness of the proposed institutions; and the specific application of provisions for States Parties. The six co-sponsors of the PTBT Amendment Conference initiative indicated that they had been encouraged by the discussion in the Ad Hoc Committee of Draft Protocol II on verification and compliance and stated that parallel verification mechanisms with respect to each of the possible environments would create a costly and imbalanced verification régime, and such a subdivision could only be undertaken, provided there is agreement on the required level of verification with respect to environments other than underground. They were ready to consider the suggestion to broaden the mandate of the Ad Hoc Group of Scientific Experts in order to encompass other verification methods. They stated that the work of the Ad Hoc Committee and the process of achieving a comprehensive test ban treaty through the amendment of the 1963 Partial Test Ban Treaty should complement each other. A number of Western delegations expressed clear reservations about some aspects of Draft Protocol II. They were concerned in particular about the threshold for verification, adequacy of seismic array, the on-site inspection provision and the role and composition of the Secretariat.

IV. CONCLUSIONS AND RECOMMENDATIONS

45. It was generally recognized that discussions held in the Ad Hoc Committee this year had touched upon the major issues of a nuclear test ban in considerable detail. The debate was considered useful in preparing the ground for future in-depth consideration of the issues reflected in this report.

46. The Ad Hoc Committee noted with appreciation the participation of the Ad Hoc Group of Scientific Experts to Consider International Co-operative Measures to Detect and Identify Seismic Events at a meeting of the Committee. The ongoing work of the Ad Hoc Group was commended and it was felt that the results of the second major technical experiment recently concluded by the Ad Hoc Group, (GSETT-2), would make an important contribution to the issues addressed by the Ad Hoc Committee on seismic verification mechanisms.

47. The Ad Hoc Committee agreed that substantive work on agenda item 1 should continue at the 1992 session of the Conference and, accordingly, recommended that it should be re-established at the beginning of the 1992 session.

CONFERENCE ON DISARMAMENT

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REPORT OF THE AD HOC COMMITTEE ON A NUCLEAR TEST BAN

CORRIGENDUM

1. Page 4, paragraph 8, line 1: 'Committe' to read 'Committee'.
2. Page 6, paragraph 18, line 1 should read: 'A nuclear weapon State belonging to the group of East European and other States expressed a continued...'.
continued...'
3. Page 7, paragraph 19, five lines up from bottom of paragraph should read: 'It reaffirmed that the question of a nuclear test ban should be dealt with on the basis ...'.
4. Page 9, paragraph 29, eight lines up from the bottom of paragraph should read: 'Office of Technology Assessment, which stated that all the United States' testing is performed ...'.
5. Page 9, paragraph 30, bottom line should read: 'It pointed to the major changes that had been...'.
major changes that had been...'